The Evolution of Artificial Illumination in Nineteenth-Century Literature: Light, Dark, and the Spaces In Between

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This thesis concentrates on the role of artificial light in the society, culture, and literature of the nineteenth century. Technologies of illumination in this period had a great effect on how society operated and how people experienced space and reality. These effects will be studied through reference to contemporary sources, historical analysis, and literary analysis.

Each chapter uses a distinct theoretical viewpoint, and maintains a focus on a particular author (where possible). In the first chapter, the role of firelight in the works of Elizabeth Gaskell is examined, using Gaston Bachelard's ideas on fire and psychology. The second chapter focuses on the role of candlelight in the works of Wilkie Collins, using Jacques Lacan's theories on the Gaze. Due to the density of metaphoric references to gaslight in his fiction, Émile Zola's work is the focus of the third chapter, while Jean Baudrillard's theories on the nature of modern reality inform the theoretical analysis. The fourth and final chapter examines electric light's rise to prominence and the rapidly changing attitudes towards it. It was impossible to limit this chapter's study to only one author, so instead attention is paid to how electric light transitions from a fantastical technology to something real; this is done through a close examination of the early Science Fiction of H.G. Wells and Jules Verne, before the study moves to examine the realism of E.M. Forster and Edith Wharton. The theoretical background of this chapter is informed by a combination of previously covered theory, with attention also paid to posthumanism.

The thesis identifies a number of trends and developments in the relationship between light and literature. It notes how artificial light created a space symbolically independent of light and dark, as well as elaborating on each light source's individual symbolism. It also documents the relationship between artificial light and the transition of society and culture into modernity; it outlines the development, and cultural acceptance, of the notion of a technologically connected society and consumerism. Perhaps most importantly, this study identifies a psychological connection between literature, light, and the individual, and examines the representation of such a concept in the symbolism and metaphor of artificial light.

“Light is the first essential. Light stimulates, nourishes, preserves. You can no more do without it, Mr. Fairlie, than if you were a flower.”

- Wilkie Collins, *The Woman in White*

Contents:

Light, Dark and Shadow: The Nineteenth-Century Lightscape

Light, by its very nature, is oppositional. Its binary relationship with darkness has led to light emerging as one side of a symbolic structure that has become representative of other similarly positive and negative dichotomies. Western culture and literature has been dominated by the white and black dualism of light and dark for a very long time. Consider the depiction of light and darkness in the Bible's depiction of Creation. God, in the Book of Genesis, creates light, and emphasises the human relationship with it: 'And God saw that the light was good; and God separated the light from darkness'.[1] Light is clearly contrasted to darkness, as it is set up as a positive symbol; it is 'good.' It is knowledge, power, and understanding 'separated' from darkness's negative obscurity. As Michael Ferber establishes in *A Dictionary of Literary Symbols:* 'Light and Darkness are probably the most fundamental and inescapable terms, used literally or metaphorically, in the description of anything in life or literature.'[2] Through further biblical examples, and references to Dante's *Inferno,* Milton's *Paradise Lost, Beowulf* and certain Greek myth, he elaborates on the role of light and darkness in literature: 'Light is traditionally linked with goodness, life, knowledge, truth, fame, and hope, darkness with evil, death, ignorance, falsehood, oblivion and despair.'[3] Artificial light sits awkwardly in between these states, and in nineteenth-century literature, reflected something more complex than just dichotomous opposites.

At the start of the nineteenth century, the symbolic relationship between light and dark was still primarily binary. Lord Byron writes of fear of the absence of light in his 1816 poem, 'Darkness,' a poem that was published just prior to the boom in artificial light that emerged later in the century. It imagines the 'dread' and 'desolation' of a world without day:

> Morn came and went – and came, and brought no day,
> And men forgot their passions in the dread
> Of this their desolation; and all hearts
> Were chill'd into a selfish prayer for light.[4]

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[1] *The New Oxford Annotated Bible,* Genesis 1.3-1.4 (Oxford: Oxford University Press, 2007) P. 11.
[2] Michael Ferber, *A Dictionary of Literary Symbols* (Cambridge: Cambridge University Press, 1999) p. 112.
[3] Michael Ferber, *A Dictionary of Literary Symbols,* p. 112.
[4] Lord Byron, 'Darkness' in *The Works of Lord Byron* (London: John Murray, 1833) ll. 6-9, p. 284.

The people Byron describes become aware of their desolation in the dark of eternal night. Their prayers for light are 'selfish' – the desire they have for light causes them to forget their passions and yearn for any kind of light. Byron writes of a dark apocalyptic wasteland where:

> The palaces of crowded kings – the huts,
> the habitations of all things which dwell,
> were burnt for beacons; cities were consumed,
> And men were gather'd round their blazing homes
> To look once more into each other's face.[5]

Fire, a man-made source of light, binds the people of Byron's poem. Artificial light, unlike the absent sun, can be controlled and provide illumination, hope and life in the desperation of Byron's wasteland. It unites people, and dissolves difference, as both palaces and huts are burned in an intense desire for light amongst the darkness. Byron presents this type of artificial light as having its own symbolic potency; it has distinct psychological, social and cultural effects. This thesis will explore these associated concepts in a wide range of literature, with particular focus on the value of different types of artificial light that became available during the period.

Anna-Teresa Tymieniecka describes what she terms 'The Primeval Dialectic of Life', in the relationship between light and dark:

> When we refer in any way to light and/or darkness, their essential conjunction is necessarily surmised – conjunction and opposition. This very opposition indicates a primal relationship: darkness without reference to light would have no degree in quality, no pitch, no intensity; in fact, it would have no qualitative endowment at all. This amounts to saying that there would be no meaning of 'darkness.' And the same holds for light.[6]

Tymieniecka suggests that the dialectic of light and dark permeates life itself, and influences consciousness and individual psychology and ideology. This is important as it establishes a distinct link between human, mind, and light. There is something satisfying about the binary dualism of light and dark metaphor; it is a clear and attractive prospect to narrative and symbolic satisfaction – it is either one or the other. Greg Lynall argues that 'in the eighteenth-century there is a shorthand of referential meanings' used by poets and writers to refer to light in a way that suggests 'light [as]

[5] Lord Byron, 'Darkness', ll. 11-15.
[6] Anna-Teresa Tymieniecka, 'Light and Darkness: The Primeval Dialectic of Life' in *Analecta Husserliana: The Yearbook of Phenomenological Research, Volume XXXVIII,* ed. Anna-Teresa Tymieniecka (Dordrecht: Kluwer Academic Publishers, 1992) p. vii.

representing rationality, knowledge, understanding'.[7] Yet artificial light, by its very nature, troubles such cadential metaphoric resolution, and begins to suggest states *between* rigid structures of light as positive and darkness as negative. Through this creation of an alternate space of reality – one that does not conform to the order of day and night, or the natural progression of light to dark, and dark to light – the invention and adoption of artificial light in the nineteenth century had a distinct effect on individual and social psychology, as well as literature. People had greater freedom of movement within towns and cities, and domestic life was constantly changing to suit its new illumination. In his book, *At Day's Close: Night in Times Past,* A. Roger Ekirch suggests that artificial illumination is 'arguably the greatest symbol of modern progress', arguing that artificial light transformed nocturnal life in the Western world: 'By blurring the boundaries between day and night, they altered the pace and scope of people's lives.'[8]

The nineteenth century, so the following chapters will argue, is where this relationship definitively changed. The dichotomy of light and dark evolved in this period, as it moved away from medieval relationships with light and darkness. Ekirch describes the attitudes to light that dominated the Middle Ages and how they evolved prior to the nineteenth century. He outlines the reliance on the natural order of day and night in early modern societies:

> Night brutally robbed men and women of their vision, the most treasured of human senses. None of sight's sister senses, not even hearing or touch, permitted individuals such mastery over their environs. Were early modern communities not so dependent upon personal interaction, the power of sight would have been less critical. But these were small-scale traditional societies in which face-to-face encounters predominated.[9]

There is a parallel development of society and artificial light during these dark times. In early modern spaces, natural light and darkness held sway. Even though fire, lamps and candlelight helped to keep obscurity at bay, they did not impact upon the living conditions, and individual psychology, as much as artificial light did within the nineteenth century.

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[7] Greg Lynall, Discussion on Poetry and Light in 'Free Thinking' (BBC Radio 3, 30 April 2015)
[8] A. Roger Ekirch, *At Day's Close: Night in Times Past* (New York: W.W. Norton and Company, 2005) p. 332.
[9] A. Roger Ekirch, *At Day's Close: Night in Times Past*, p. 8.

The history of artificial illumination in this time is, as Chris Otter points out, 'inseparable from two political histories, those of discipline and of capital'.[10] Lighting development was bound up with the parallel growth of surveillant visual societies, and notions of consumerism and economy. Different forms of light held different connotations and relationships within these concepts. Artificial lighting affected how power worked in urban and domestic spaces, and furthered the development of capitalist economy. At the start of the century, most domestic illumination and public lighting was sourced from old flame-based light that had been prevalent for centuries before, yet by the end of the century these old lights faced competition from new technologies of gas and electric, which brought with them regimented systems of light, power, and economy. Yet it is important to note that no light source ever really replaced its predecessor. In fact, as Chris Otter establishes: 'Most late-nineteenth-century Britons still relied largely on oil lamps and candles.'[11] There was no hierarchy of replacement to nineteenth-century lighting technology; instead, the many different sources sat alongside each other, creating various temporal and perceptual juxtapositions.

Outlining the Focus: Artificial Light and Literature

The history of artificial light was so complex during the nineteenth century – it was entirely transnational, and intrinsically linked to various technological, industrial, and social developments of the time – that it is difficult to maintain focus on one particular time, place, or writer within the period. For this reason, the light itself will be privileged in the following chapters above anything else. This study will cover wherever, whenever, and in whomever's work, the effects of artificial light are most strongly felt. However, as this could result in rather sporadic analysis, I will also try to limit the focus to provide a sense of conciseness by focusing each chapter on a distinct group of texts, or the works of an individual author.

Although the chapters will be split by light source, they will not neglect to mention other light sources featured in the same texts – indeed, some of the most interesting examples of artificial illumination's use in literature are formed from the

[10] Chris Otter, *The Victorian Eye: A Political History of Light and Vision in Britain, 1800-1910* (London: University of Chicago Press, 2008) p. 2.
[11] Chris Otter, *The Victorian Eye,* p. 8.

contrasting perceptions of different sources in the same spaces and environments. This study will examine the development of such perceptions from early in the century, near the time of gaslight's introduction, all the way to the growing acceptance of electricity in the pre-war years of the twentieth century. The enmeshing of so many different attributes and associations is what makes a literary study of such phenomena so alluring. Not only does a literary analysis concerning nineteenth-century light highlight the divergence of binary symbolism, but it also reflects ever-evolving contemporary relationships with the period's constantly changing lightscape.

To journalistic writers such as George Augustus Sala, author of *Gaslight and Daylight: With Some London Scenes they Shine Upon,* the appeal was obvious. Sala wrote of the attractive mystery of gas:

> The gas has secrets, and I happen to know them. The Gas has a voice, and I can hear it – a voice beyond the rushing whistle in the pipe, and the dull buzzing flare in the burner. It speaks, actively, to men and women of what is, and of what is done and suffered by night and by day; and though it often crieth like Wisdom in the streets and no man may regardeth it, there are, and shall be some to listen to its experiments, hearken to its councils, and profit by its lessons.[12]

Sala, although talking primarily about gas, suggests many interesting ideas about perceptions of nineteenth-century illumination. He claims that the light 'speaks' to people, it communicates a new world to them, and provides 'wisdom in the streets', as it opens up the darkness to new opportunity. The contrast between night and day had become liminal – it could no longer be charted merely by the sun's cycles. In many instances the use of literary light is almost unconscious, and not nearly as explicit as Sala's description. Writers frequently utilise the changing lights in conjunction with other themes of their works, without directly commenting on the light itself. This will be another idea explored in the thesis, as contrasts and comparisons are drawn between the literary use of light and contemporary accounts directly addressing it.

The first chapter of this thesis will examine the worth of firelight in the novels of Elizabeth Gaskell. Firelight and candlelight predated the period by centuries, but both were still widely used well into the nineteenth century. Fires were at the centre of domestic life, and at the core of the Industrial Revolution's processes and technology. Firelight was a symbol of old ways of life, a means of holding back the

[12] George Augustus Sala, *Gaslight and Daylight: With Some London Scenes They Shine Upon* (London: Chapman and Hall, 1859) p. 156.

night as people found safety in the aura of its flames. The principles of hearth light were virtually the same as those of prehistoric fires; burning fuel resulted in open flames that were used for their warmth, light and social nature. Fire, while clearly not a nineteenth-century development, is incredibly important to the spectrum of the century's developing light symbolism. French phenomenologist Gaston Bachelard's theories on firelight will be important to this chapter. Bachelard, most commonly regarded as a spatial theorist, wrote a number of texts dealing with humanity's psychological relationship with light. *The Psychoanalysis of Fire* (1938) suggests that fire has always been an object of intense *reverie*, and that humanity holds an inherent link to its associations of safety and domesticity. His text can often be overly ambitious when prescribing ideas to fire's relationship with people, yet it is a fascinatingly useful account of the *symbolism* of fire. Gaskell's works use fire as a symbol of life and mind during the industrial period. By studying firelight in the context of her works, we are able to witness how artificial lighting developed from something that was central to the home, and atmospheres of domesticity, into a tool of perception that was far-removed from such intimacy.

In the second chapter, the thesis will examine the significance of candlelight's presence in nineteenth-century literature. Candlelight often supplemented the light of the fire, as the tapers allowed the flame to be tamed and made portable. A candle's light was an extremely limited aura around the flame of the wick; it was optically very different from the bulk of firelight, or the pervasive floods of light from gas or electric. Candles provided relatively poor light in comparison to later forms of illumination, yet were still widely used in the face of their new illuminatory siblings. Contemporary accounts of the candle praised it for its ease of use, availability and portability, suggesting they 'were excellent for reading since they were portable and provided soft light'.[13] Psychologically, the candle resonated with people on an individual basis; with a candle, an individual could light their own space in an intimate and isolated way. This inherent value was emphasised by the burgeoning growth of networked lighting systems of gas and electric. Within the candle, one could perceive the fuel, the consumption of fuel and the final product of light itself. It

[13] William Joseph Dibdin quoted in Chris Otter, The Victorian Eye, p. 204.

was pure light; as Wolfgang Schivelbusch writes: 'The flame flickering around a wick for the first time burned totally and exclusively for the purpose of giving light.'[14]

The candle is equally able to light the seemingly contrasting ideas of close romantic intimacy, as well as gothic atmospheres of ambiguity. The candle's dual ability to portray atmospheres of safety and threat are illuminated by Jacques Lacan's theories on the Gaze. Due to the candle's ability to make the bearer of its light both subject and object of a gaze – both the holder of light and vision, yet also enclosed within an aura of illumination – Lacan's theories are applicable to almost all of the candle's literary uses as they uncover exactly how and why the candle can create its variable atmospheres. As well as Lacan, this chapter will also introduce Michel Foucault's notions of the role of surveillance and the power of vision which become yet more important later in the thesis. Foucault's ideas on the threat of vision, encapsulated largely in his analysis of Bentham's Panopticon, are useful in examining not only the functions of the candle, but also later on in discussions of networked vision in urban spaces.

The candle as a symbol is especially versatile, particularly in this period, due to the contrasts that were drawn between this archaic form of artificial light and more technologically advanced networked lights. In order to comprehensively cover all of these different associations of candlelight, it was decided that an author, or genre, that ties the disparate strands of metaphor together should be analysed to determine how the candle is such a versatile symbol. Wilkie Collins's Sensation fiction is the subject of this chapter, as it features all variants of candle symbolism due to it combining elements of crime fiction (useful for examining the candle's role in mental enlightenment and detection), gothic fiction (ideal to exemplify the candle's role in blurring the boundaries of what is known and what is not), and examinations of what constitutes a rational mind (of particular interest due to the candle's liminal symbolism, and its link with nineteenth-century psychology).

It is important to note at this stage while there will be references to oil-lamps in this study, there will not be as strict a focus as there is on other light sources. This is because although the processes involved in lighting and sustaining their illumination are different, perceptions of and by them are highly similar to candles

[14] Wolfgang Schivelbusch, Disenchanted Night: The Industrialisation of Light in the Nineteenth Century (California: University of California Press, 1995), p. 6.

due to them both being wick-based flame-lights. To include both in separate sections would confuse the clarity of arguments regarding the candle, as initial research suggests a similarity between the two lights' use in symbolism and creating atmosphere.

The third chapter will concentrate on Gaslight. A 1792 development by William Murdoch saw the first commercially viable gas lighting trialed in public spaces for the first time. By 1826, a large number of towns and cities in Britain, Europe and America were lit by gas. The technology became a quintessential symbol of nineteenth-century life, and was a unique lighting phenomenon in that its history, from development to abolition, was almost entirely contained within the period. Gaslight's development crossed countries and generations in an almost continual evolution throughout the century. It became bound up in the way that people both saw, and more importantly, behaved within cities and towns. It encouraged ideas of display and spectacle as it emphasised the power of vision to its occupants. Jane Brox accurately summarises gaslight's effects as she writes:

> Buoyant, frivolous, expansive, uncontainable humanity: light seemed not only to extend the hours of the day but also to have created life out of absence and to have allowed for different qualities in human nature to have their say.[15]

Gaslight created nightlife; as Brox suggests, it created life out of the obscure nothingness of nighttime. Gas lighting networks' implementation in cities ran parallel to the development of consumerism and economy; gas allowed shops and businesses to stay open longer, and provided factories with the light they needed to continue production into the night. It changed the way people behaved and dictated how they would spend their money. However, due to its intense relationships with the 'mass', or the network, gaslight detached the individual from their light. Artificial light started to become anonymous, a faceless network of light, the control of which was taken out of the hands of the individual person. Modernity was being crafted in the newly gas-lit streets of cities across Europe and North America; mass production and the growth of capitalism spurred on the development of a space that was dominated by *images* and *visions* of capitalist society.

Due to gas lighting's multi-national development, the third chapter will be focused largely on Paris and its literature. Gaslight's cultural resonance can be seen

[15] Jane Brox, *Brilliant: The Evolution of Artificial Light* (London: Souvenir Press, 2012) p. 75.

perhaps most clearly in the French capital, as it was a city redesigned to shine in its illumination. Baron Haussmann's renovation of Paris brought gas lighting to the attention of everyone, with many writers, such as Charles Dickens, commenting on Paris's bright illumination. As such, gas soon began to be associated with the idea of the modern, and Paris became a shining beacon for a new type of society founded on extravagance and consumption. The notion of Paris as a city *designed* around gas lighting impacts upon perceptions of the illumination, so comparisons will also be drawn between Paris, a newly remade jewel of gas, and London, where gaslights vied for dominance over old and new architecture and public spaces. For this reason, this chapter will largely focus on the work of Émile Zola, whose texts focus on the growth of visual society within new Paris and the symbolic value of gas-lighting, while also contrasting his work with that of Charles Dickens and Oscar Wilde, amongst others, whose texts provide a counterpoint to Paris in their depictions of London. The chapter will examine how gas illumination created a new reality for people to exist in, a third space that did not follow the social and cultural codes of day and night, but instead was a new temporal space which disrupted the balance between natural light and darkness.

The fourth and final chapter will discuss how Electric light galvanized these ideas of interconnectivity, and the expansion of life from day into night that developed in the wake of gaslight. It took the principles of gaslight – networked light, an external fuel source, and the control of a governing body – and amplified them. Electric light, however, was not a flame light. Perceptually, it was completely different to the warm yellows and oranges of its predecessors as it flooded wherever it lit with bright whiteness. This created a wider divergence between illumination and the individual, as light was anonymised even further; the electric starkness seemed faceless, there was no perceptible point of light as with the flame, instead it simply *was.* The new white lights disturbed the intimate human link between flame and individual, but also provided a networked light source that was rid of gas's acrid smells, potential to stain its surroundings, and the threat of combustion (although it did of course bring its own dangers). Electricity was seen as a purification of the processes and interfaces of gaslight, and as such held suggestions of promise and potential many years before its actual use in cities and homes.

This chapter will examine the perceived potential of electric light, before moving on to see how attitudes changed towards it in the late years of the nineteenth

century, and the pre-World War I years of the twentieth. Electric light's growth was spread over a number of years, and perceptions of it changed quickly as it developed, which means that it created rapidly shifting literary connotations and associations. Electric lighting and power was a fantastical element in the first wave of nineteenth-century Science Fiction; it found a place in the works of Jules Verne, where it was largely a technology of hope, and a symbol of futuristic possibility. However, as it became more real, and the application of it more widespread, it began to be envisioned in literature as an oppressive tool of surveillance, as may be inferred from the work of H.G. Wells. The relationships between society, people and electric light lend themselves well to a posthumanist investigation into the nature of the technology. Again, however, this perception of electric light was not to last, as it became, thanks to technological improvements and innovations, the light source that would come to define the twentieth century. Authors such as E.M. Forster and Edith Wharton documented this shift as they began to use electric light as a symbolic tool in their realist fiction. It enabled people to illuminate the darkness more boldly than ever before, and extended human reach into new times and spaces. The shift of perceptions of electric light from fantasy, to horror, to a kind of normalization, which can be seen in its use by these authors, will be the focus of the final chapter.

The nineteenth century was a period characterised by its relationship with artificial light. It engineered massive advances in both work and pleasure, as it cultivated the growth of industrialism, production and consumption, and the whole notion of nighttime society and culture. In the space of a century artificial light developed from something that held back the darkness to something that defeated it entirely. The rapidity of such a development, over just one century, means that the history of artificial light, and its portrayal in literature, is a dense and highly rich web of contrasting perceptions and ideas. Everything is connected, and as one light source did not replace the other directly, each type of illumination influenced perceptions of others, making such a subject a tantalizing and important area of study. This thesis makes use of many direct contemporary accounts of the light sources, as well as current light historians' work, such as Wolfgang Schivelbusch's *Disenchanted Night* (1995). Chris Otter's *The Victorian Eye* (2008) and Jane Brox's *Brilliant* (2011). While these texts have been immeasurably useful in discerning cultural ideas regarding artificial light within the period - this thesis would probably not exist without them - none of them ever truly engage with the literature of the period in

remarkable depth. There is something conscious to their evidence, as they actively engage with the history of light and its perceptions; unlike the authors studied here whose works create the symbolism of light in a much more covert sense than the direct commentary featured in historical texts.

Otter's *The Victorian Eye* gives a deeply historical and factual look at the development, adoption and science behind artificial light's nineteenth-century history. Otter himself outlines his intentions that his text 'argues that the way in which streets, houses, and institutions were lit, and the ways in which people saw within them, have a political history'.[16] Otter's work is concerned with the exact science of the perception of light, both in a political and more literally scientific manner. It portrays the effects of light on the eye in intense detail, with similar attention being given to the technological workings of the new lights of the period. It is a fascinating text, one that is incredibly well structured and researched, but it is not one that focuses on literary representations of light sources. Wolfgang Schivelbusch's *Disenchanted Night*, the seminal nineteenth-century lighting history text, is similar in its intense scrutiny of the systems and operation of lighting developments. Again, Schivelbusch's text is incredibly researched, using contemporary accounts to create an image of artificial light's reception and reactions to it. Schivelbusch emphasises the industrialization of light within the period, and the psychological and cultural reactions to the anonymisation of light and its movement away from the individual. Schivelbusch does occasionally use literary analysis to corroborate his points, yet actual deep textual readings that privelege literary texts are limited. It is a similar case with Jane Brox's *Brilliant*, which uses much more modern evidence, including the work of Schivelbusch and Otter, to create an image of the evolution of artificial light from prehistoric artificial light all the way to the introduction of LED lighting in the late twentieth century. While comprehensive in its scale, the intense concentration on the entirety of artificial light's history draws attention to exactly how much more there is to be said about lighting during the nineteenth-century period. Brox's history covers developments on both sides of the Atlantic, and is particularly useful to my study for her depictions of the struggle to create a perfect electric light. However, there is again little to no attention paid to literature, and the value of artificial light as a symbol during the nineteenth century.

[16] Chris Otter, *The Victorian Eye,* p. 1.

There has been a growing awareness and use of light criticism in the years that this study has taken place in, which has enabled my ideas to exist within a quickly expanding field. When the approach was initially outlined there was very little in the way of analysis directly addressing artificial light in literature, however, I have since been involved with a number of conferences and calls for articles which were focused on a conceptual use of artificial light and its effects on art. The identification of the presence and value of artificial illumination has allowed me to contribute to international conferences, such as Paris Diderot University's 'Uses of Light in British Art of the Nineteenth and Twentieth Century' Conference in June 2014, and the British Society of Literature and Science's conference on Light in April 2015. As well as this, my work and ideas have featured in a number of journals and textbooks, for example, the University of Durham's *Kaleidoscope* journal which in 2014 focused on Light in Literature, and a book chapter in *Dark Nights, Bright Lights: Night, Darkness, and Illumination in Literature,* published in October 2015. I have been fortunate enough to catch the burgeoning wave of light and literature criticism at what appears to be the start of something that could become much bigger, and have been involved with the cultivation and spread of the approach.

This thesis will use the work already conducted in the history of artificial illumination and combine it with close analysis of the literature of the period. As already discussed, the major texts that have already been written on light address it directly; they most commonly use sources that explicitly reference the light. My thesis focuses on literature for three main reasons, which when combined make this study one that acknowledges what has come before it in terms of historical accounts, but also looks at new ways that these can be used in conjunction with literary criticism. Firstly, in literature, portrayals of artificial light in the period are far more marginal than direct historical accounts, and so not very often studied. They become part of the symbolic infrastructure in nineteenth-century texts. I intend to draw out the more covert reactions to light sources, through an analysis of the use of them in symbolism and metaphor, and establish whether they correspond with the more historically driven accounts of light. Writers often commented on the new lights directly – consider Sala's accounts, as well as Dickens's series of 'Night Walks', and many more that will also be discussed in this thesis – yet within their fiction, poetry, and prose, artificial light became a means of creating atmosphere, tone and themes. Secondly, archetypal symbolic boundaries were erased by artificial light, as it broke

the dualism of light and dark. The reality of artificial light disturbed ideas of light as good and dark as bad, and this thesis will examine how this dissolution was accomplished and what symbolic resonance the cleaving of light and dark had on traditional metaphors. Thirdly, examining artificial light through the lens of literary criticism allows both lighting history and nineteenth-century literary criticism to gain an entirely new perspective on the roles of both within the culture and society of the nineteenth century. As useful as histories and contemporary accounts are, nothing can provide us with a more complex, and dense, image of the discourse of nineteenth century artificial light than its literature.

Chapter 1 - Firelight

Frank Millet, ‘A Cosey Corner’, 1884

1.1 Nineteenth Century Firelight: Hearth, Home and Industry

Fire is arguably the most important facilitator of human progress in history. Evidence suggests that prehistoric methods used to produce fire varied around the globe, the earliest recorded and most primitive being the spark and tinder method, yet all came into being during roughly the same time period around 230,000 years ago.[17] Alongside its obvious uses as a light and heat source, as well as a cooking aid, its use in creating and shaping early pottery allowed for the storage of food, and also aided artistic expression in early ceramic arts. Fire played an important role in the development of visual art. It gave life to early cave paintings, Zach Zorich establishing the use of fire in the caves of Lascaux:

> Whatever tales may have been told inside Lascaux have been lost to history, but it is easy to imagine a person moving their fire-lit lamp along the walls as they unravelled a story step-by-step, using the darkness as a frame for the images inside a small circle of firelight.[18]

Fire was a narrative device, allowing stories to be told through its medium of concealment and revelation. Fire was invaluable to early human societies, its versatility endowing it with uses as an aid to survival, but also to early civilisation. To use a rather reflective metaphor, fire was the spark that ignited human culture and creativity.

Arthur Zajonc proposes that fire has an intimate link with the evolution of the human mind. He writes that as he studied early firelight, 'it seemed to [him] that the characteristics of a culture are mirrored in the image of light it has crafted'.[19] He suggests that in early civilizations, their cultures of religion, art and scientific study were based around the fire they cultivated and inhabited. He emphasizes that by its light, the human eye could see in times when it could not have before; it was psychologically beneficial as it meant darkness was conquered and human life could expand into previously uncolonised times and spaces. Zajonc also saw fire's multiplicity of symbolic meaning in these early fires. His reading of the myth of Prometheus suggests the dual nature of fire as a gift, but also a burden and potential danger: 'The gift of fire and all it symbolizes is invariably linked to the burden of

[17] F.W. Robins, *The Story of the Lamp (and the Candle)* (London: Oxford University Press, 1939) p. 3.
[18] Zach Zorich, 'Early Humans made Animated Art' in *Nautilus: Light,* Issue 11, March 27 2014, from http://nautil.us/issue/11/light/early-humans-made-animated-art [accessed on 12/1/15]
[19] Arthur Zajonc, *Catching the Light: The Entwined History of Light and Mind* (Oxford: Oxford University Press, 1995) p. 8.

care. Under human control, the fire of the gods burns as well as warms, blinds as well as illumines.'[20] The myth of Prometheus suggests an ancient symbiotic link between mankind and fire, and provides one of the first examples of fire's metaphoric associations. Carol Dougherty describes fire's role in the Promethean myth as 'a powerful symbol of divine presence, a source of both protection and devastation, the medium for contact communication with the gods'.[21] She emphasises fire's role in ancient domestic spaces, and points to the goddess Hestia as an example of the worth placed in firelight by the Ancient Greeks. The word Hestia literally means 'hearth', and the goddess represented order in a domestic household, intimately tying the hearth with homeliness and family. One must nurture the flames to ensure their beneficial natures remain dominant over the more detrimental and destructive qualities. Gary R. Varner corroborates this: 'Fire represents many things to many people and cultures. It is recognised as a purifier, a destroyer and as the generative power of life, energy and change.'[22] Fire's symbolic potency grew from its physical and phenomenological properties. The alchemical variability of fire allows it to be drawn as a motif for varying stages of growth and decay - birth, death and rebirth. It is, as it is in the Promethean myth, 'the technology to provide warmth, light, and protection from enemies and the elements – and yet it also can be the source of its total destruction'.[23]

Fire's prehistoric cultivation played an important role in developing and shaping humanity's ultimately social destiny. A fire's light and warmth extended living hours, and encouraged the formation of communities that shared the warmth and light of the flames. We can see a reflection of cave dwellers gathering around a blazing fire in the scene of early nineteenth-century hearth-lit home life. Fire brought people together in the nineteenth century; A. Roger Ekirch documents how

> Light's principal value lay in expanding the borders of domestic space for work and sociability. During long winter evenings, the hearth furnished the greatest glow. Even in dwellings with more than a single room, it became the focus for evening life, combating the cold darkness with heat and light.[24]

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[20] Arthur Zajonc, *Catching the Light: The Entwined History of Light and Mind,* p. 11.
[21] Carol Dougherty, *Prometheus* (New York: Routledge, 2006) p. 49.
[22] Gary R. Varner, 'Fire Symbolism in Myth and Religion' in *Circle Magazine: Sacred Flames, Sacred Fires* (Wisconsin: Circle Sanctuary) Issue 105, Winter 2009 from http://www.authorsden.com/categories/article_top.asp?catid=62&id=43114 [accessed on 10/10/2013]
[23] Carol Dougherty, *Prometheus,* p. 47.
[24] A. Roger Ekirch, *At Day's Close: Night in Times Past,* p. 101.

It was particularly important in poorer households to whom the multiple attributes of a hearth fire - as light, as a source of heat, and as an aid to cooking and household tasks - were invaluable economically and emotionally. Judith Flanders details how poorer homes were often warmer due to their smaller, more condensed size, lack of windows, and the central hearth fire.[25] Firelight conjured feelings of safety and togetherness; there was a psychological value to its attributes as well as its obvious domestic qualities.

Fire was the example that all of the new forms of light which came into being in the nineteenth century had to better, and the basis of many of them too, Wolfgang Schivelbusch stating that 'Fire is the origin of artificial light'.[26] He posits that the torch, lamp and candle remain 'clearly recognisable'[27] as descendents of a burning brand plucked from a hearth. As architecture changed and developed from being communal to more family-based, the hearth remained a symbol of essential human togetherness. During medieval times, the hearth was often positioned in the centre of the room, as it was believed that this location would provide the room with the greatest warmth and the best spread of light – however, visibility was often impaired by the amount of smoke produced by the fire, and the spread of light was uneven and dim at best.[28] Around the seventeenth century, chimneys began to be constructed and put into use, another technology that became immeasurably important during the nineteenth century. Chimneys had a deep cultural resonance in this period – consider the figure of the chimney sweep, and how they became a symbol of the changing nature of childhood in Charles Kingsley's *The Water Babies,* and William Blake's 'The Chimney Sweeper' poems in *Songs of Innocence and of Experience.* The hearth's centrality within the home and family life was deepened through this architectural innovation. Improvements in central heating and chimney technology meant that the fire was now more of a social hub; a place to see by its light yet also somewhere to be seen.

The hearth became the epicenter of domestic life. Cheaper and easier to maintain than individual light sources, the fire confined familial activities to one room; it was where people worked yet also where they entertained. However,

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[25] Judith Flanders, *The Making of Home: The 500-Year Story of How Our Houses Became Homes* (London: Atlantic Books, 2014) p. 35
[26] Wolfgang Schivelbusch, *Disenchanted Night,* p. 4
[27] Wolfgang Schivelbusch, *Disenchanted Night,* p. 6.
[28] Jeffrey L. Singman, *Daily Life in Medieval Europe* (Westport: Greenwood Press, 1999) pp. 47-48

perceptions of a fire's flames were subtly altered according to social class and household. In his 1898 book *The Englishman's House: A Practical Guide for Selecting or Building a Home,* C.J. Richardson describes the domestic appeal of the fireplace, as a place where 'social mirth exults and glows before the blazing hearth'.[29] The fire was a gathering place in smaller cottages and houses, somewhere to swap tales yet also to contemplate. Mike Hepworth describes how:

> The hearth, as the place where heat is generated before the invention of central heating, is closely associated with the heart as the organ which gives life and is traditionally regarded as the source of human emotion. To be welcomed at the hearth is to anticipate a closer and more intimate form of human relationship.[30]

Etymologically, the origins of the word 'hearth' are intimately tied to the Latin word for 'focus', which is used in English to mean the centre of attention.[31] The hearth, and the fire within, became almost synonymous with the entire concept of home and domestic life. People could gather before the light of the fire to read, or recite copies of the latest literature. Janet M. Philips and Walter Alfred Peter Philips even suggested that Charlotte Brontë's poor eyesight had her fireside reading habits to blame.[32] Paintings and pictures of nineteenth-century fireplaces commonly feature families or individuals surrounding the flames, where they read, work, and relax. The fireside was a common focus for artists who depicted domestic life in their paintings and portraits, particularly in the work of George Smith (1829-1901). In the paintings below we can see how intimately domestic life was bound up with matters of the hearth.

[29] C.J. Richardson, *The Englishman's House: A Practical Guide for Selecting or Building a Home* (London: Chatto and Windus, 1898) p. 404.
[30] Mike Hepworth, 'Privacy, Security and Respectability: The Ideal Victorian Home' in *Ideal Homes? Social Change and Domestic Life,* ed. Tony Chapman and Jenny Hockey (London: Routledge, 1999) p. 25.
[31] Judith Flanders, *The Making of Home: The 500-Year Story of How Our Houses Became Homes* (London: Atlantic Books, 2014) p. 35
[32] Janet M. Philips and Walter Alfred Peter Philips, *Victorians at Home and Away* (London: Croom Helm Ltd., 1978) p. 96.

George Smith, 'By the Fireside' 1858.

George Smith, 'A Sewing Lesson by the Fireside' 1867

Smaller houses, often country cottages or cellar dwellings in cities, would frequently only heat and light their kitchen. In these spaces, that Ekirch terms 'the meanest hovels,' the fire would often be the sole source of light and heat.[33] It made sense to those who lived in these smaller places to turn their kitchen into the crucible of social activity. It was a place where they could work, eat, cook and relax. The fire enabled the kitchen's occupants to see by its light, and understand the processes behind cooking and preparing food; it was a companion as well as an aid - *Cassell's Book of*

[33] A. Roger Ekirch, *At Day's Close: Night in Times Past,* p. 103

the Household suggesting 'What place is more cozy on a cold winter's night than the kitchen fireside?'[34] However, the proximity into which the fire brought members of the household often meant that many anxieties and tribulations were acted out on the hearth. Consider the drama of Emily Brontë's hearths in the titular house of *Wuthering Heights* (1847). Her firesides suggest variable things to the various occupants of the house at different points of its turbulent history. At first, to Lockwood, the Heights 'glowed delightfully in the radiance of an immense fire, compounded of coal, peat, and wood',[35] as he attains safety and warmth from the snowstorm in front of the hearth's flames. Upon reading the older Catherine's diary, Lockwood is presented with yet another example of fireside drama as Catherine and Heathcliff are banished from the 'paradise on the hearth'[36] due to upsetting Hindley. A similar, yet much exaggerated image of Catherine's relationship with the hearth occurs as she dedicates herself to the sitting-room fire even after the chimney is damaged in a storm.[37] Isabella's disapproval of the much-changed Heights following her marriage to Heathcliff is also conveyed through the effects of the hearth light:

> There was a great fire, and that was all the light in the huge apartment, whose floor had grown a uniform grey; and the once brilliant pewter dishes which used to attract my gaze when I was a girl partook of a similar obscurity, created by tarnish and dust.[38]

The house is completely changed after she returns following her and Heathcliff's elopement, and the hearth is the scene of a row between herself, Hareton and Joseph in the 'dingy, untidy hole'. The light of the fire, which usually creates a sense of homeliness, traps Isabella within the aura of the disheveled Heights. Firelight, while often praised for its social attributes and ability to cultivate a sense of safety, also held its occupants in stasis and threatened the friction of familial proximity. It could create atmospheres of both gentility and hostility, and represent many different states of conflict. The hearth, quite literally when considering its etymology, was a focal point, one that both attracted the gaze of its onlookers, yet also enveloped them in an aura of light and warmth. Schivelbusch laments the loss of such a unifying aspect of domestic life, as technological inventions such as the television (and later personal electronic

[34] *Cassell's Book of the Household* quoted in Asa Briggs, *Victorian Things* (Stroud: Sutton Publishing Limited, 2003) p. 208
[35] Emily Brontë, *Wuthering Heights* (London: Penguin Books, 1995) p. 10
[36] Emily Brontë, *Wuthering Heights,* p. 19
[37] Emily Brontë, *Wuthering Heights,* p. 85
[38] Emily Brontë, *Wuthering Heights,* p. 138

devices), ousted the fireplace from its role as focal point during the twentieth century: 'When the household lost its hearth fire […] it lost what since time immemorial had been the focus of its life.'[39]

By virtue of hearth-fire being uncontained, at least in comparison to more isolated sources like candles or oil-lamps, it had the propensity to be unlawful and often unpredictable. Ekirch comments on the open fire's potential to spark and flare into its surroundings, highlighting the danger of using such a volatile phenomenon in the enclosed spaces of the home.[40] Jane Brox notes the dangerous health effects of living with smoke from a hearth fire in a very different type of home, as she writes on nineteenth-century Inuit icehouses. She talks of the importance of fire light to this kind of home, still used as a means of communal light, and of the importance of the women's role in lighting and tending to the fire. Women were traditionally in charge of the fire, Brox quoting nineteenth-century anthropologist Walter Hough who said that 'The Eskimo have no phrase expressing a greater degree of misery than 'a woman without a lamp'.[41] Fire was an essential aid to life in most homes regardless of class, which also meant that different domestic spaces were subject to damaged property, as well as ill health; *The Essex Standard* documents the damage caused by an ill-attended fireplace at the royal property of Sandringham House. The house was preparing for a visit from Prince Albert when an upstairs fireplace caused a 'disastrous fire' to break out in the upper part of the house, causing what was estimated to be between £10,000 and £15,000 worth of damage.[42]

Perceptions of firelight differed depending on an individual's relationship with lighting, tending to, and experiencing the light of the fire. In smaller, lower class houses, the responsibility of lighting and tending the fire often fell to a member of the family, however, in the larger gentry houses, it was the servants' responsibility to tend the fires of the house. Regardless of the class of the domestic space, there was always a great sense of value placed in a well cared-for hearth fire. Eugene Gardner, in *Home Interiors* (1878), insisted upon the importance of a fireplace in the face of developing central heating technologies; the fireplace was an 'essential […] without which no house is complete'. He acknowledged the importance of heating the home, but

[39] Wolfgang Schivelbusch, *Disenchanted Night,* p. 28.
[40] A. Roger Ekirch, *At Day's Close: Night in Times Past*, p. 51.
[41] Walter Hough 'The Origin and Range of the Eskimo Lamp' quoted in Jane Brox, *Brilliant,* p. 159.
[42] 'Disastrous Fire at Sandringham House' in *The Essex Standard: West Suffolk Gazette* Issue 3178, November 7th, 1891, p. 2.

emphasized the need of a fire for its psychological benefits: '[B]uild upon an ample hearth a glowing fire of hickory-wood, and in the presence of that genial blaze […] will congregate all that is good and kind and lovely of the household.'[43] The domestic guidebooks of Mrs. Beeton document a similar dynamic in the relationship between servants and firelight in the middle class home. Her approach to fire lighting is much more prosaic than that of Cassell's cozy fireside. She reinforces the duty of the servant to tend the fires, a process that should not be a concern of the family of the house:

> The evening duties of a lady's-maid are pretty nearly a repetition of those of the morning. She is in attendance when her mistress retires; she assists her to undress if required, brushes her hair, and renders such other assistance as is demanded; removes all slops; takes care that the fire, if any, is safe, before she retires to rest herself.[44]

Care of the fireplaces was both a servant's first and last task of the day. Jenni Calder comments on the hierarchy of servant life in tending the fires: 'Those barely on the middle-class rung would have a skivvy whose main task this would be. [It was] the most menial of duties, and reserved for the lowest of the low in the servant hierarchy.'[45] Much of the time this would be a female servant; Sally Mitchell details the average morning of maid Hannah Cullwick: 'On a typical day, she cleaned the stove flues, started the coal fire, scrubbed the front stoop, black-leaded the fire grates, cleaned the sitting room, set the dining room table, and finally cooked breakfast – all before 8 a.m.'[46] Women held a complex relationship with fire during the nineteenth century, as it was expected of them to cultivate an atmosphere of warmth and homeliness through their care of the fire. Indeed, a woman's care of fire began to relate to contemporary ideals of women's virtue and identity – something that will be examined in the following sections through an analysis of Elizabeth Gaskell's work.

The perceptual history of firelight is one riddled with class and gender inflections. Maids of gentry houses who tended the fires were often the lowest of the servants, working in cellar kitchens with 'inadequate lighting and a general aspect of gloom'[47] and would have perceived the fire completely differently to their masters who lounged in the warm glow of the flames. Fire, a symbol of safety and warmth,

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[43] Eugene C. Gardner, *Home Interiors* (Boston: James R. Osgood, 1878) pp. 185-186.
[44] Isabella Beeton, *Mrs. Beeton's Household Management* (Hertfordshire: Wordsworth Editions Limited, 2006) p. 945.
[45] Jenni Calder, *The Victorian Home* (London: B.T. Batsford, 1977) p. 87
[46] Sally Mitchell, *Victorian Britain: An Encyclopaedia* (Abingdon: Routledge Publishing, 2011) p. 378
[47] Jenni Calder, *The Victorian Home,* p. 89

was also a danger to these women. James L. Volo documents this: 'For women, childbirth remained the greatest danger in their lives, yet, barring complications, the second leading cause of death among women remained death from fire.'[48] The understanding of fire as both a destructive and binding power within the home led to it being used as a symbol of destruction and renewal, especially in terms of class boundaries. This is a dynamic that can be seen in the variable symbolic nature of fire in literature; the fires of Elizabeth Gaskell's novels that symbolize hope and life are worlds apart from the fires of French Naturalists such as Émile Zola, where they come to represent sexual jealousy and passions.[49]

Fire also played a role in creating the industrial spaces of the nineteenth century. Were it not for the furnaces at the heart of mills, factories and foundries, steam power could not exist, and the early influx of industrialism to Britain and the Western World would have been impossible. Fire was vital to both production and the lives of the industrial urban poor. It was quite literally at the heart of the Industrial Revolution, as detailed by Robert M. Adams in his anthropological study *Paths of Fire: An Anthropologist's Inquiry into Western Technology,* where he acknowledges 'knowledge of the multiple uses of fire was a crucial technology'.[50] Without the furnace at the centre of factories, or the coal-powered engines of trains, the cultural changes enforced by the revolution would have been impossible.

Gaston Bachelard and the Symbolism of Firelight

Gaston Bachelard identifies the poetic qualities of fire in his ambitious work *The Psychoanalysis of Fire* (1938). The scientist-turned-philosopher was concerned with what he called the 'poetics' of the alchemical element; he sought to explain how and why fire was such a useful tool for linguistic exposition and modes of expression. Bachelard examines fire as a concept, taking the physical attributes of the phenomenon and imbuing them with philosophical potential. This abstraction, the removal of fire from the physical world and its conceptual recentering, allow

[48] James L. Volo, *Family Life in Nineteenth Century America* (Westport: Greenwood Press, 2007) p. 33.
[49] F.W.J. Hemmings, 'Fire in Zola's Fiction: Variations on an Elemental Theme' in *Yale French Studies,* No. 42, Zola (1969) pp. 26-37
[50] Robert M. Adams, *Paths of Fire: An Anthropologists Inquiry into Western Technology* (Princeton: Princeton University Press, 1996) p. 36

Bachelard's notions and theories to flourish within literary analysis due to the variability of their symbolic representation.

Bachelard calls fire a 'priveleged phenomenon which can explain anything'.[51] What Bachelard intimates is fire's potential to be used as an agent to explain things both 'intimate and universal'.[52] The reason Bachelard suggests fire as a universal metaphor is through its variability in reality; a fire can exist as embers, or as an all-consuming blaze, the different stages of fire conjuring different symbolic resonances. In this case it is not light's relationship with darkness that is used to represent an archetypal metaphor, but the variability of the actual light source itself in portraying a wide range of states. Instead of light symbolism being simply dichotomous, a symbol more associated with its binary relationship with darkness, firelight is completely variable in its blaze, and therefore its metaphor. Within the flames of the fire, Bachelard sees the poetic potency to create and destroy, and to illuminate and blind.

The Psychoanalysis of Fire explains Bachelard's notions of the anthropological and psychological history of fire. Bachelard suggests the sexualisation of fire, claiming the act of rubbing two sticks together to create a spark is in itself a simulation of a sexual act, especially to prehistoric people for whom fire, sexuality and consciousness were all entwined. He also discusses the role of fire in terms of discipline and respect; he sees in fire a symbol for the growth of a child's understanding of concepts of authority and truth. For Bachelard, social prohibitions are the first level of fire perception that an individual learns, and a defining moment in a child's relationship with authority. At first it is the parental warning that scolds, the fire can 'strike without having to burn',[53] which is in turn followed by a desire to furnish the intellect with proof of this warning, the burn a child receives in discovering fire for itself reinforcing the value of parental intelligence and respect. Now while not strictly concerning the *light* of a fire, this is still an interesting subject for discussion, as it suggests the role of social conditioning in experiencing illumination – something important to the use and perception of artificial light. In another example, he considers the child who is warned not to look directly into the light; at first it is the warning that keeps the child's eyes away, but eventually, the warning will need validation and the child will look, only to be blinded, but still be

[51] Gaston Bachelard, *The Psychoanalysis of Fire,* trans. Alan C.M. Ross (Beacon Press, 1964) p. 7
[52] Gaston Bachelard, *The Psychoanalysis of Fire,* p. 7.
[53] Gaston Bachelard, *The Psychoanalysis of Fire,* p. 11.

rewarded in a renewed trust in parental guidance. This reflects the notion that how we feel about light is partly socially constructed; we do not see the light purely, but with certain stigmas already attached *in light of* other forms of illumination.

The most valuable idea to this study that Bachelard raises is his analysis of how fire can encourage reverie. Bachelard highlights the flames' tendency to be the focus of contemplation, an attention that encourages intellectual thought and mental processes. He traces the origins of this idea back to the taming of fire: 'The fire confined to the fireplace was no doubt for man the first object of reverie, the symbol of repose, the invitation to repose.'[54] Bachelard captures the essence of a nineteenth century fireside in this analysis. The fireside was a place of thoughtfulness, a centre for contemplation and a space for relaxation, especially following the symbolically Promethean work put into kindling and creating fire: 'To be sure, a fire warms us and gives comfort. But one only becomes fully aware of this comforting sensation after a long period of contemplation of the flames' (p.14). An individual must surrender themselves to the flames, and take up a position of submission and repose to ensure reverie and contemplation. Bachelard's analysis of reverie hints at something slightly more complicated than a standard dictionary definition of reverie as merely 'a daydream'.[55] Indeed, *The Oxford Dictionary of English Etymology* cites the roots of the word reverie as growing from varying contrasts. While still associated with the act of musing and dreaming, the origins of the Old French word are cemented in dreams of extremes; of 'rejoicing, revelry, wildness, rage'.[56] This suggests that a definition of reverie, at least that which will be used in this chapter, should focus on the varying states of emotion experienced during the focused daydreaming. Bachelard himself suggests that reverie 'has no linking force', and that it 'does not involve a transcendent subject'[57]; reverie is reality, it reflects the self and does not pander to a higher, more dream-like state. Eighteenth-century French philosopher Antoine de Rivarol speaks of reverie as 'the child of extremes,' arguing that to fully experience true reverie one must be either extremely happy or sad. [58] Reverie is much more reflective than the dream. There is a link between the state of emotion and the quality

[54] Gaston Bachelard, *The Psychoanalysis of Fire,* p. 14.
[55] *Oxford English Dictionary,* (Oxford University Press, 2010) p. 645.
[56] *The Oxford Dictionary of English Etymology,* ed. C.T. Onions (Oxford: Oxford University Press, 1966) p. 763.
[57] Gaston Bachelard, *The Poetics of Reverie* (Boston: Beacon Press, 1992) pp. 5-7.
[58] Antoine de Rivarol, *Ouevres Complétes De Rivarol* (Paris: Leopold Collin, 1808) p. 159. Translation my own.

of the reverie experienced, as well as a clear reflection of the varying states of reverie within the varying flames of fire. French philosopher Raphaël Enthoven describes reverie thus:

> Born of the desire – and not the need – to be directly involved in our surroundings, reverie, strips the world of its utility. It borrows the power of narration from wakefulness and the power of divination from sleep, and keeps them vying to suspend the alternation of day and night.[59]

Enthoven outlines the capacity of reverie to blur self-conscious reflections, the 'narration' of waking consciousness, with the freeform thought of dream. He speaks of a connection to the reverie-experiencing individual's world while in reverie, but one that is abstracted and different to actual reality. The variable aspect of reverie, that of neither wakefulness nor dream, is what makes it so symbiotic with fire; through their changeable forms, they gain a kind of self-reflective allegiance. The fire, as will be seen in the various examples from Gaskell's texts, often reflects the state of mind of its witnesses. It can be a mesmeric process, as the positivity of the flames reflects hope in characters, and conversely the dying fire's embers represent futility.

The reverie before the fire requires people to self-reflectively contemplate. A fire's light illuminates, holding its occupants within its light, while also encouraging insular reflections. The variability of these flames mean that the textual fire can depict a wide range of feelings and emotions. This is particularly evident in the works of Elizabeth Gaskell, whose novels detail a country swaying from the effects of the Industrial Revolution. In her novels, fire can be both the reflective centre of home and safety, and the burning heart of industry and threat. The following section of this chapter will attempt to extrapolate these ideas, and explain them even further using examples of Bachelard's notions of self-reflective flame-based metaphors, or 'pyrophors' as he himself terms them. This chapter will subsequently examine the variability of fire's metaphoric use, and the associated reveries; from the small, domestic fires of *Cranford,* to *Mary Barton's* desperate use of the hearth, before ending with a commentary on the dangerous reveries of factory fires, and the fiery heart of the industrial revolution, the furnace fire.

[59] Raphaël Enthoven, 'On Reverie' in *The New York Times* (April 6 2011) from http://opinionator.blogs.nytimes.com/2011/08/06/on-reverie/?_r=0 [accessed on 12/2/15]

1.2 Elizabeth Gaskell, Fire and Reverie: The Domestic and the Individual

Not a great deal of scholarly criticism has been written on Elizabeth Gaskell and hearth light, with only very brief mentions in texts such as *Servants and Paternalism in the Works of Maria Edgeworth and Elizabeth Gaskell,* where Julie Nash suggests the importance of the hearth in Gaskell's work: 'Gaskell uses humble kitchen items – pots and pans, grate, dresser, and hearth – to symbolize the Victorian ideal of domestic private sanctuary.'[60] Firelight is often only peripherally acknowledged in Gaskell's homes within criticism, yet it is too *alive* to be examined in a way that does not address it directly. Carolyn Lambert is one of the few to understand the importance of fire to Gaskell's work, as she examines the value of fire as a universal symbol: 'Fire is a living thing, and its fluctuations can represent the ebb and flow of emotion.' [61] She also quotes Gaskell's own words on the type of fire that she preferred:

> A wood-fire has a kind of spiritual, dancing, glancing life about it. It is an elvish companion, crackling, hissing, bubbling: throwing out beautiful jets of vivid many-coloured flame.[62]

This is in many ways a typical Gaskell fire; there are elements of both safety and threat to the descriptions of the 'beautiful jets' of flame that are tempered by the 'crackling, hissing, bubbling' nature of the fire. However, the most useful point of comparison between Gaskell's ideal fire and her fictionalized hearths is the emphasis on the fire as an'elvish companion', it is a fantastical partner, an aid to perception and life. Carolyn Lambert's exploration of Gaskell's fire is limited, however, and represents only a very small part of her examination of the domestic spaces and objects of Gaskell's literary homes. This chapter will explore in much more depth the role of fire within Elizabeth Gaskell's works, and combine it with examinations of reverie, as well as analysis of nineteenth-century perceptions of hearth light.

The reverential weight of firelight is often dictated by its context. Gaskell provides varying extremes of emotion and circumstance within her fiction, as her texts straddle class divides and geographical locations. With this in mind, this study

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[60] Julie Nash, *Servants and Paternalism in the Works of Maria Edgeworth and Elizabeth Gaskell* (Aldershot: Ashgate Publishing, 2007) p. 66.
[61] Carolyn Lambert, *The Meanings of Home in Elizabeth Gaskell's Fiction* (Brighton: Victorian Secrets, 2013) p. 106.
[62] Elizabeth Gaskell, Letter to George Smith, August 4th 1859 in Carolyn Lambert, *The Meanings of Home in Elizabeth Gaskell's Fiction,* p. 106.

will begin with one of the smallest and most focused points of reverie, the domestic fires of *Cranford* (1851), before moving on to discuss more desperate fires and reveries. The titular village Gaskell creates is a genteel antithesis to a place like *Mary Barton's* Manchester, an opposition that is reflected in both places' firesides. Cranford is a place stubbornly resisting the gravity of the Industrial Revolution. Its effects are felt; there is a covert feeling of a pressure to change on the village, and the female-dominated society owes much to the promise of work to the men from industrial cities. However, Cranford is generally a microcosm of gentility, especially in comparison to Gaskell's more industrial novels. The village's relationship with light reflects this unwillingness to change, and displays a determination to hold its established values in stasis. In her initial descriptions of Cranford, Gaskell writes that 'the inhabitants of Cranford kept early hours, and clattered home in their pattens, under the guidance of a lantern-bearer, about nine o' clock at night; and the whole town was abed and asleep by half-past ten'.[63] The people of Cranford still abide by medieval social patterns. Ekirch describes how for many families in the middle ages:

> Well before towns barred their gates, nature signalled day's retreat. For many families, the rural environment, not watches or clocks, kept life's daily pulse […] No time of the day aroused greater anticipation than the onset of darkness. Nor did any interval merit more careful calibration.[64]

Cranford resists the technological improvements in lighting that helped to shape industrial towns, and as such still retains a submissive, medieval attitude towards night and darkness. The image of resistance to the modern created through the village's inhabitants being led back to their homes by a lantern bearer encapsulates Cranford's reliance and trust in established traditions of safety. Encroaching darkness is an unknown entity that must be avoided, rather than being kept at bay with new forms of light, such as the gas that was illuminating cities and industrial towns at the same time. This typifies the light of *Cranford*. It is either the light of the sun, which dictates the available hours in the day, or firelight and candles that secure perception and allow those in Cranford to see and communicate, while also keeping them contained within their homes. Darkness is something that must be respected rather than dismissed. Fire, while inspiring reverie, is also treated reverentially. It is a binding agent to the society of the village. The fireplace is the point of focus by which

[63] Elizabeth Gaskell, *Cranford* (Oxford: Oxford University Press, 1998) p. 3. All further extracts from this work will be given in the main body of text unless otherwise stated in the footnotes.
[64] A. Roger Ekirch, *At Day's Close: Night in Times Past,* p. 90.

its inhabitants achieve perception and enlightenment, reflecting Bachelard's theories of flame-based reverie as more of a 'social reality than a natural reality', as something that is 'very rarely [...] utilised for any other kind of contemplation. When near the fire, one must be seated; one must rest without sleeping; one must engage in reverie on a specific object'.[65] Gaskell's characters are always 'huddled' (p. 17), or similar, as near to the fireplace as possible, for warmth and perception, where they often take part in contemplative individual or social reveries.

There is an element of emotional cultivation in the act of sitting before the fireplace and staring into its flames, which allows the ladies of Cranford the opportunity to rescind their genteel social fronts, and surrender to the emotional influences that accompany intense reverie. While Matty and Mary are huddled by the fire, they sit talking low, and Mary narrates: 'I know we cried quietly all the time' (p. 17). Their tears are in response to Captain Brown being killed by a train in a successful attempt to save a child from the same fate. Their quiet, joint reverie before the fire reminds them of the change that their environment is threatened with, and their attempts within Cranford to hold this tide back. Killed by the ultimate technological symbol of the industrial revolution, Captain Brown's death acts as a signifier of the modern other, and the threat to established life that accompanies it. Indeed, prior to his death, he makes Miss Jenkyns a present of a wooden fire shovel, an indicator of tradition and domestic life. The fire speaks to the women as a symbol of both potential change, yet also of safety and containment; within the confines of their hearth they are safe from the ambiguous threat of the modern, they may exist in the perceptible sphere of the known hearthlight, yet in the constriction of the hearth's aura they cannot change or progress.

Matty Jenkyns, in another example of willing repose before the flames of the fire, ruminates on what her life could have been if not for failed investments in the Town and Country bank. Mary tells the reader that 'by a sudden blaze which sprang up from a fall of the unstirred coals, I saw that her eyes were full of tears – gazing intently on some vision of what might have been' (p. 107). Her experiences before the flames may be categorised through Bachelard's outlining of how the psychological processes of reverie before the flames are different from a dream: '[T]he dream proceeds on its way in a linear fashion, forgetting its original path as it hastens along.

[65] Gaston Bachelard, *The Psychoanalysis of Fire,* p. 15.

The reverie works in a star pattern. It returns to its centre to shoot out new beams.'[66] The process that Bachelard defines as reverie is more reflexive than the dream, and more attuned to the individual's reality and memories; as exemplified in Matty Jenkyns's gaze into the flames. It is not a dream in the sense of its relentless haste, but instead a more reflective model of contemplation. As she ponders her life before the flames, reveries encouraged by the flames resolve within her and remind her of her lost potential.

Models of similar fireside reverie also occur with startling frequency in Charles Dickens's *Great Expectations* (1861). Key themes in the novel are self-reflection and growth, and many times these reflections becomes conscious and spiralling when the self-awareness takes place in front of the fire. Pip's occasions of reverie in particular have strands highly indicative of Bachelard's star-shaped model of reverie. As Pip grows aware of the creeping dread that accompanies his stealing of the bread and butter for the convict, he sees the hearth as the marsh winds 'make the fire glow and flare'.[67] The depiction of the hearth's reaction to outside influences mirrors Pip's emotional reactions to what took place on the marshes. The fire avenges by reflecting Pip's changing emotions back to himself, his reverie in front of the flames reminding him of the possible consequences of his actions out on the marsh. When threatened with Mrs Joe's Tickler, Pip looks in 'great depression' at the fire, as he gazes disconsolately he is reminded of his experience with Magwitch the fugitive, and the effect it has had on him as he stands before the 'avenging coals'.[68] Conversely however, when Pip has 'deposited that part of his conscience'[69] in his bedroom, he goes for a 'final warm in the chimney corner' with Joe, and the fire instead suggests safety and warmth to him. Reverie in *Great Expectations* is a theme that develops in a similar fashion to Gaskell's hearthside ruminations, as the capability of fire to behave sedately in its burn, or blaze wildly is utilised to express the changing emotions and conscience of Pip and other characters.

There is a similar example of the symbiotic transformation of qualities of fire and states of mind in *Cranford*, as Matty Jenkyns sits before the fireplace and burns letters from her past. Having read the letters by the firelight, she decides to use the flames to burn the documents in order to secure a cathartic release. Matty materialises

[66] Gaston Bachelard, *The Psychoanalysis of Fire,* p. 14
[67] Charles Dickens, *Great Expectations* (London: Penguin, 1996) p. 13.
[68] Charles Dickens, *Great Expectations,* p. 13.
[69] Charles Dickens, *Great Expectations,* p. 13.

the mental and emotional processes of reverie as she attempts to shed her discontent by destroying the physical objects tying her to her past in the fire's purifying flames. Her emotional state is fragile at the time she attempts this release, stating that 'No one will care for me when I am gone' (p. 44). There is something quite ritualistic to Matty's actions, as Mary states: 'And one by one she dropped them into the middle of the fire watching each blaze up, die out, and rise away, in faint, white, ghostly semblance, up the chimney, before she gave another to the same fate' (p. 44). Each letter Miss Matty drops in symbolises a release; a relinquishment of a part of her past that has caused her distress. It externalises the notion of reverie, as she is able to hold tangible incidents from her past in the form of these letters and documents, which are more easily disposed of in the fire than internal memories and emotions. The language used in the description of the act clarifies that this is an attempt at purification, specifically the image of the 'white, ghostly semblance' disappearing up the chimney, suggesting death and spiritual release.

Fire, as well as being enlightening, in both visual and intellectual senses, is purifying; thoughts and feelings can be both found and lost within the flames. The versatile nature of fire-metaphor charges its deconstructive connotations with associations of rebirth. The catharsis of burning the letters leaves her emotionally drained, and she saves a letter from her brother Peter, which she secludes in the 'sacred recesses in her own room, for fear, by any chance, it might get burnt' (p. 48). Matty's relationship with the fire grows more intense after this act. She appreciates its flames at their base level, of warmth and of light, yet now it begins to suggest deeper emotional ties to her. Mary suggests to the reader that as Miss Matty looked upon the fire, she begins to envision instead a 'husband, as a great protector against thieves, burglars and ghosts' (p. 106). The reverential capabilities of the fireplace enforce this emotional thought. The fire has become a supplementary husband to her. After the release of her emotional deadweight in pirouetting spirals up the chimney, the fire has become her protector, securing the safety of a perceptible space as well as emotional reverie and repose.

Women, Identity and Fire

Martha Vicinus suggests the nineteenth-century ideal of a woman's relationship with fire: 'the lady should combine total sexual innocence, conspicuous consumption and

the worship of the family hearth.'[70] The cultivation and care required in tending to the flames of the hearth resulted in an intense emotional link between women and fire. Through care and attentiveness, women could harness the power of fire, providing themselves with heat and light, and aiding domestic atmospheres. In many ways, the hearth became a metonym for the home. The aura of hearth light was deemed a woman's social space. Consider Tennyson's 'The Princess', where the misogynist voice of the King encapsulates women's relationship with the fire, and reinforces the emotional link through the rhyme of 'hearth' and 'heart':

> Man for the field and woman for the hearth:
> Man for the sword and for the needle she:
> Man with the head and woman with the heart:
> Man to command and woman to obey;
> All else confusion.[71]

Women held an intimate link with the light of the fire, as they were expected to cultivate and care for it. Tennyson's words suggest firelight often staved off the sense that 'all else [was] confusion', and provided women with a space of visual and mental clarity, as well as reinforcing misogynist ideals. Nineteenth-century gender concepts, such as those outlined in John Ruskin's influential lecture 'Of Queens Gardens', reinforced the ideal that a woman's place was tending the fireside and man's was out at work or business, yet through the intimate link between their gender and the fireplace, women could also gain a sense of agency within the home. The hearth's association with women was in many ways instilled, Lydia Murdoch suggests, with 'moral meaning, equating a proper "hearth" with English national virtue and identity'.[72] Whether women could control the energy and power of the fire often made a distinct difference in asserting a strong sense of self and identity. Indeed, the weapons the women of Cranford choose in defence against possible burglars are tellingly tools associated with fire:

> I know we used to make a regular expedition all round the kitchens and cellars every night, Miss Matty leading the way, armed with the poker, I following with the hearth-brush, and Martha carrying the shovel and fire-irons with which to sound the alarm (p. 89).

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[70] Martha Vicinus, *Suffer and Be Still: Women in the Victorian Age* (Indiana: Indiana University Press, 1972) p. ix
[71] Alfred Lord Tennyson, 'The Princess' in *The Works of Alfred Tennyson: The Princess and Other Poems* (London: Strahan & Co., 1872) p. 125, ll. 427-431.
[72] Lydia Murdoch, *Daily Life of Victorian Women* (California: Greenwood, 1970) p. 92.

Fire's symbolic role as that of protector is presented in this instance through its associated apparatus, as the feminine world of Cranford attempts to cling to its asserted reality, and avoid the darkness of the unknown and the very visible threat of the new. It is similar to how Phillis in *Cousin Phillis* (1864) finds solace from the 'closeness' of the house by sitting 'under the woodstack'[73]; it is not safety in the aura of fireside reverie as such, but is still referenced through the ephemera and associated processes of the fireplace.

Perceptions of reality, and the arrangement of an organised mind through spatial and visual relationships are important themes in Gaskell's works, and important ideas in the formulation of her female characters' identity and agency. The obscure nature of darkness abounds in Gaskell's fiction in a way that draws contrasts to the safety and security of self in front of the fire. The county of 'Darkshire' in *North and South* is a complete contrast to Helstone (although even that name carries associations of hellfire and brimstone), and in a more isolated example from *Cranford*, 'Darkness Lane' suggests the importance of the senses in creating solid ideas of environment and by extension identity and self.

The ladies of Cranford, a town so stubbornly resisting industrial and technological advancements, envision fire as protector and illuminator; it enables them to enter a state of reverie that brings with it a strong state of reality and self. The issue of defining the differences between what we perceive as reality and identity through our senses, and the idea of an innate self, were a primary concern of the Unitarian movement Gaskell associated herself with. William Carpenter, a prominent Unitarian physiologist and scientific authority, had a distinct influence on Gaskell's approaches to questions of mind and self. In his works, he explores the conflict between the senses, and 'all those higher exercises of the reasoning powers',[74] which he terms the Will. Carpenter describes the struggle between the mind and the senses, and the importance of maintaining a balance between the two in regards to consistent awareness of self, identity and reality. Carpenter was heavily influenced by the emergence of mesmerism in the early nineteenth-century, and tried to rationalise the apparently supernatural force using his Unitarian mental philosophies. As Louise Henson, in *Victorian Literary Mesmerism,* suggests: 'The empowering agency of the *will* was crucial to maintaining control over one's own mind and ultimately over the

[73] Elizabeth Gaskell, *Cousin Phillis and Other Stories* (Oxford: Oxford University Press, 2010) p. 215.
[74] William B. Carpenter, *Principles of Comparative Psychology,* 4th edition (London, 1854) p. 649.

self.'[75] Light was incredibly important to this balance; it allowed a person a greater command over their immediate environment and the opportunity to place their own self within a knowable field. Similarly, philosopher David Hume uses images of fire in his discussions of the senses and the value of experience:

> When I throw a piece of dry wood into a fire, my mind is immediately carried to conceive, that it augments, not extinguishes the flame. This transition of thought from the cause to the effect proceeds not from reason. It derives its origin altogether from custom and experience. And as it first begins from an object, present to the senses, it renders the idea or conception of flame more strong and lively than any loose, floating reverie of the imagination.[76]

Hume directly addresses the reverie of the imagination and its relationship to the processes involved in kindling fire. He outlines a symbolic link between fire and experience, as he speaks of the 'origin' of understanding that dry wood augments the flames as something derived from 'custom and experience'. The value of fire to the development of the human condition is based on its role as an 'object, present to the senses'. The intimate personal processes behind the cultivation of firelight, those of lighting, tending to, and extinguishing, reinforced the solidity of reverie and self-identification that may be witnessed in its flames.

There is a fear of sensory deprivation evident in the disruption of the balance between sense and imagination that seeps through the pages of *Cranford.* Fire provides safety, and the security of perception, yet in the darker moments of the text, Gaskell blurs images of known and unknown through obscuring binary concepts of light and dark. To lose perception is to lose control of self and rationality. While at Mrs. Forrester's house on 'Darkness Lane', the group discuss recent reports of ghosts, hauntings and burglaries, focusing particularly on the sighting of a 'lady all in white, and without her head' (p. 100), who appears at the side of the road wringing her hands in grief. The apparition emphasises the role of light in securing reality; darkness disables rational reasoning powers, and permits the brain to fill in perceptual gaps. The headless spectre represents this, as through losing her head, she loses the main senses integral to creating reality. This reference to the headless woman is a clear example of the threat of ambiguous realities, yet nothing to the lucidity of Mary Smith's fears:

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[75] Louise Henson, 'Mind and Mental Training in Gaskell' in *Victorian Literary Mesmerism,* ed. Martin Willis and Catherine Wynne (Amsterdam: Rodopi, 2006) p. 86.
[76] David Hume, *Essays and Treatises on Several Subjects* (London: A. Millar, 1758) Section 5, p. 314.

> I owned that my pet apprehension was eyes – eyes looking at me, and watching me, glittering out from some dull, flat, wooden surface; and that if I dared go up to my looking-glass when I was panic-stricken, I should certainly turn it round, with its back towards me, for fear of seeing eyes behind me looking out of the darkness (p. 98).

In a typically Gothic trope, Gaskell laments loss of control over the gaze. Mary's biggest fear is of losing her status as the subject of the gaze relationship; of losing the power to control her own perception, and looking at herself in the mirror yet being forced to submit power of asserting reality. The place of refuge, the protector of the equilibrium between the mind and the senses, is the state of reverie before the fire. In the act of reverie, the observers of the fire are contained within its field; it is a static point that allows for repose of the mind. The village is in a similar stasis to the onlooker of the fire. It is a state anticipating change, but not *of* change.

This idea is brought to its zenith in a depiction of one of *Cranford's* many social fireside scenes. When writing of the primitivism of human relationships with fire, Bachelard discusses a kind of group reverie of coziness in front of the fire, which he terms the 'warmth of the nest'.[77] He suggests that a shared 'gentle heat is thus the source of the consciousness of happiness. More precisely, it is the consciousness of the origins of happiness'.[78] The reverie before the fireplace becomes a social event as its ancient associations with community and its potential to inspire self-reflection are emphasised. Convening at Mrs. Jamieson's, one of the more prosperous abodes of Cranford, the group arranges themselves in chairs placed in a semi-circle around the drawing room fire. As Mary waits for Mr. Mulliner to give the signal to be seated, she ruminates, 'I suppose he thought we could find our own way to the circle round the fire, which reminded me of Stonehenge. I don't know why' (p. 76). Within Mary's unconscious link there is a connection of the attributes of fireside reverie with the ancient connotations of the stone circle; it hints at a deeper link between firelight and humanity, one that is ancient and subconscious. Stonehenge holds associations of ancient knowledge, ritual, spirituality and worship, that all reflect histories of fire and human development. Richard L. Gregory suggests that our perceptions have been conventionally moulded by their prehistoric origins:

> The answer [to why associative perceptions exist] must lie far back in the history of human experience – no doubt from pre-human dramas of success

[77] Gaston Bachelard, *The Psychoanalysis of Fire,* p. 38.
[78] Gaston Bachelard, *The Psychoanalysis of Fire,* p. 38.

> and failures of survival. For presumably we find flowers and sunny days beautiful because, through millions of years, they enhanced living and increased chances of creating new life.[79]

Gaskell's Stonehenge metaphor exemplifies this supposed ancient cause of how we perceive things through the reverential nature of fire and perception of its light, and further suggests fire's extremely intimate links with social humanity.

The processes of perception and reverie before firelight require acceptance. One must first sink into a position of repose to achieve the state of insular reverie that fire inspires, and one must also accept the possibility of admonishment, be it through dimming eyes, burning heat, or self-reflective reverie. Richard L. Gregory suggests the reflexive relationship between emotion and perception: 'Emotions can affect perceptions, though not systematically. Conversely, perceptions can affect emotion – hence powers of art.'[80] Miss Matty's emotional ties to the firelight, and her perception by it, and of it, relay a reflexive relationship. Fire reflects circumstance onto its subject; Matty's cathartic reverie when burning the letters heightens her emotions, as emphasised by the wisps of smoke that rise up the chimney. She is literally adding fuel to the fire, which then reflects her mental state until she is overwhelmed and retreats to her room. However, at the centre of this circle of reverie - the point that the reverential cycle revolves around - is the dark cloud of extinguishment. At the heart of fireside reverie is perception of self, reality and circumstance, yet to be aware of all of these things requires submission and repose before the fire, and acknowledgement of any ambiguous threat that may occur in the darkness beyond. There is a distinct quality of safety and security to the fire, an example of a potentially primal connection between civilised humanity and the protection of the flames.

The ladies of Cranford repose in their position before the flames in a similar manner to early cave-dwellers. To those ancient people, the fire would have been a respite from a dangerous world, and to the inhabitants of Cranford, it serves a similar purpose. Fire was a relic of the past, yet thanks to its ancient associations and connotations, as well as the intimate personal processes by which it could be cultivated and cared for, it still had a place in nineteenth-century culture and society. Its influence as a light source can be seen in virtually every lighting innovation in the period; gas lighting especially, attempted to isolate and amplify the flame of the fire.

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[79] Richard L. Gregory, *Eye and Brain: The Psychology of Seeing* (Oxford: Oxford University Press, 1997) p. 244.
[80] Richard L. Gregory, *Eye and Brain: The Psychology of Seeing,* p. 244.

As the Industrial Revolution tightened its grasp on Britain's domestic and urban environments, and new technologies of light were introduced, perceptions of fire changed. Firelight was at the centre of domestic life, regardless of class, and so it is treated – in the case of Matty Jenkyns especially – as a member of the family. As variable in temperament as any of Gaskell's characters or themes, the hearth and fireside reverie take an important place in her fiction. Using the fire's alchemical versatility in its symbolism, the flames may stand for a great spectrum of emotion, from the soulful introspection of *Cranford* to the much darker mood of the industrial novels like *Mary Barton.*

1.3 Variable Flames in Urban Domesticity

In *Cranford,* many of the characters sit over the fire, but hardly any truly observe it, instead it acts as a catalyst to inspire the mind into self-reflection. When this reverie is transplanted into a different context, the nature of repose, and therefore the nature of the reverie itself, change entirely. Fire consistently maintains the ability to create this inward reflection, while also retaining its ancient connotations of safety and power, yet a change of both environment and the quality of the fire itself, charges the reverie before the hearth with different qualities.

Gaston Bachelard calls fire the 'ultra-living element'.[81] It is not a static or fixed image, and so is endlessly versatile; Bachelard suggesting that fire-symbolism is both 'monotonous and brilliant, a really total phenomenon', something that embodies both submission and passion. In his conclusion to *The Psychoanalysis of Fire,* Bachelard discusses the value his analysis of fire-symbolism has in studying literary metaphor:

> [I]t [fire-analysis] should demonstrate that metaphors are not simple idealisations which take off like rockets only to display their insignificance on bursting in the sky, but that on the contrary metaphors summon one another and are more coordinated than sensations.[82]

What he suggests is an order to fire-based metaphors; that fire symbology is structured and multifaceted in its use and range of explanation. Bachelard posits that the processes of fire metaphor prove that metaphors 'summon' one another, and create a more definitive link between concept, or idea, and expositional symbol, rather than merely being linked through textual representation. This seems to suggest that there is an order to fire metaphor, an idea that becomes more important when considering the symbolic infrastructure of other forms of artificial light and their relationships with fire.

Bachelard provides an important example of the metaphoric range of fire symbolism, and how its changing image may inspire different reveries: 'Faced with a dying fire, the man who is doing the blowing becomes discouraged; he no longer feels sufficient ardor to communicate his own power to the fire.'[83] Fire, as posited in the previous section, appears to hold a symbiotic relationship with civilized man. The

[81] Gaston Bachelard, *The Psychoanalysis of Fire,* p. 7.
[82] Gaston Bachelard, *The Psychoanalysis of Fire,* p. 109.
[83] Gaston Bachelard, *The Psychoanalysis of Fire,* p. 45.

individual is ultra sensitive to the temperable appearance of fire. It functions reflexively; the different states of fire influence the emotions of its occupant just as much as the occupant may fan the flames. Bachelard suggests that in the face of a dying fire the subject feels insufficient, yet present him with a roaring blaze, or provide him with the tools to self-improve, and he will feel impassioned; the quality of the flames indicate something personal and vital to the individual who exists within the fire's aura. Within the spaces of *Cranford,* this dialogic relationship is limited to the genteel spaces of a village resolutely withstanding the influence of the Industrial Revolution. Fire is a comfort, its light holds the village in stasis and its observers in a static reverie. However, when supplanted from the gentility of Cranford to the incredibly transformed spaces of the Industrial Revolution, the role of fire is charged with different, much more passionate, attributes.

Mary Barton's Manchester and Contrasting Light

In the Manchester of Gaskell's *Mary Barton* (1848) - a bleak, dull, grimy place – firelight stands out due to more than just its illumination. The hearth is at the centre of the industrial workers' homes, yet its power as a binding force is amplified by the fragility of life, especially compared to a place like Cranford. Fire is life, to extinguish it is death; both in terms of reality - keeping warm, cooking and lighting the home - and in terms of its symbolic value. *Mary Barton* shares many similarities in its treatment of firelight with a poem published by William and Elizabeth Gaskell in 1837, entitled 'Sketches Among the Poor.' The Poem focuses on another Mary, who becomes lost in the recollections of her childhood home in the country when faced with the desperation of poor urban life. She is presented as a kind woman who helps others, yet her isolation and sadness is conveyed through the image of her alone in the warmth of her hearth at night: 'Said I not truly, she was not alone,/ Though none at evening shared her clean hearth-stone?'[84] It is in the evening, alone at her hearth, when she is lost in reveries of her previous life. The memories are bittersweet, as nostalgia exaggerates the severity of her current situation. As 'one sorrow pass'd away', only to be replaced by another, the Gaskells depict 'where so late she shared

[84] Elizabeth and William Gaskell, 'Sketches among the Poor' in *Blackwood's Magazine,* XLI (London: Strand, 1837), p. 49, l. 22-23.

the bright glad mirth,/ The Phantom Grief sat cowering at the hearth',[85] an image that conveys at the same time safety and sadness. The phantom of grief is at once kept at bay and made more perceptible by the light before the hearth, and is brought into being by Mary's solitary reveries before the flames.

Hearth light is also a symbol of both the safety of the domestic home and the threat of grief and mortality in *Mary Barton*. In the introduction to the Barton home, the homeliness of the cellar dwelling is reliant on many forms of light and fire:

> Mrs. Barton produced the key of the door from her pocket; and on entering the house-place it seemed as if they were in total darkness, except one bright spot, which might be a cat's eye, or might be, what it was, a red-hot fire, smoldering under a large piece of coal, which John Barton immediately applied himself to break up, and the effect instantly produced was warm and glowing light in every corner of the room.[86]

The warmth of the Barton home in this passage is readily apparent. Mrs. Barton and John work in tandem to provide the home with light and warmth, their cooperation bringing life to the dwelling. Their relationship with each other is complementary; Mrs. Barton opens the door, John stokes the fire, the light of which is then complemented by Mrs. Barton's lighting of candles. The fire is a constant in their home; even when they are out of doors, a 'cat's eye' of flame is still present, keeping watch over the house. John Barton's breaking up of the fire instantly rejuvenates the dark and cold room, and begins to establish him as a Promethean figure.

John Barton becomes implicitly associated with the light of the fire; it comes to define him and his actions and beliefs. He is the fire to his wife's candlelight. Her light is a purification of fire, a fragile candle flame to John's more passionate blaze. When Mrs. Barton dies, John begins his slide into monomania, explained by Gaskell through his illuminatory relations. After her death, John looks for a beaded necklace, one that was a gift to her in their initial courtship: 'He wondered if it was there yet [the necklace], and with a strange curiosity he got up to feel for it; for the fire by this time was well nigh out, and candle he had none' (p. 21). John's understanding of his own self has been disturbed by the extinguishment of his other half. He has no candle anymore and his own fire is dwindling. Without her candle to accompany and pacify the fierce nature of his firelight, John is blinded, literally left in darkness by her

[85] Elizabeth and William Gaskell, 'Sketches among the Poor' p. 49, l. 62.
[86] Elizabeth Gaskell, *Mary Barton* (New York: W.W. Norton & Company, 2008) p. 15. All further references to this work shall be given in body of text, unless otherwise stated in footnotes.

absence. At a point soon after his wife's death, his daughter Mary is described as 'the light of his hearth; the voice of his otherwise silent home' (p. 25), suggesting that he searches for another source of light to sedate the darkness. John has no capability left for a reflective reverie, his fire has died and as he looks into the hearth all he sees is burnt up ashes. He has traversed the entire range of fire's mutability, starting as the warm and passionate centre of the home, before being subjected to environmental and social pressures and extinguished, leaving nothing more than ashes.

Domestic hearth-fire was essential to the quality of life in places of industry, an idea not only expressed by Gaskell but also found in non-fiction accounts by various social commentators. James Phillips Kay Shuttleworth's *The Moral and Physical Condition of the Working Classes Employed in the Cotton Manufacture of Manchester,* similarly describes the darkness and depression of domestic life in urban spaces: 'the abstraction of moral and intellectual stimuli – the absence of variety – banishment from the grateful air and the *cheering influences of light*, the physical energies are impaired by toil, and imperfect nutrition.'[87] It is a bleak picture, as he references the absence of the 'cheering influences of light' within a home. The lack of true natural light in many dwellings heightened the responsibility of fire within the home. As Kay-Shuttleworth suggests, light's 'cheering influence' was also essential for the creation of hope and possibility – a different type of interior examination from the calm reverie of Cranford.

The Illustrated London News published many articles detailing the poor quality of life suffered in the cellar dwellings of Industrial Manchester, many of which featured illustrations of such homes, where the hearth is nearly always at the centre of domestic life. The first image below was published in 1838, and immediately exemplifies how central fire was in its importance to family life:

[87] James Phillips Kay Shuttleworth, *The Moral and Physical Condition of the Working Classes Employed in the Cotton Manufacture of Manchester: 1832* (Frank Cass & Co. Ltd. 1970) p. 25.

Image originally published in *The Illustrated London News,* 1838.

Almost thirty years later, in 1862, *The Illustrated London News* published very similar depictions of life in Manchester, along with an article on the Lancashire Distress and Relief Organisation. Accompanying it were a sequence of drawings depicting everyday life in such poor households. Again, the hearth is at the centre of the image; it is where the family gather, and a small source of comfort in such squalid conditions.

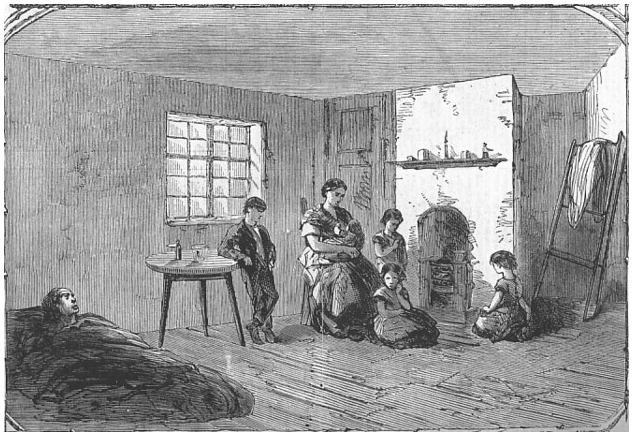


Image originally published in *The Illustrated London News,* 29th November 1862.

Another account of this dependency on fire not only for its homely attributes, but the emotions it inspires comes from the work of social commentator Friedrich Engels, who called Manchester's Old Town 'Hell upon Earth'.[88] Writing on the conditions of London, Engels describes the scene that was to greet the police when they took two arrested boys home: 'On the hearth was *scarcely a spark of fire,* and in one corner lay as many old rags as would fill a woman's apron, which served the whole family as a bed.'[89] Engels also refers to J.C. Symon's account of the notoriously poverty-stricken

[88] Friedrich Engels, *The Condition of the Working Class in England 1845* (London: Penguin Books, 1987) p. 92
[89] Friedrich Engels, *The Condition of the Working Class in England 1845,* pp. 73-74.

Glasgow slums: 'There was little or no furniture, and the only thing that gave these dens any shimmer of habitableness was a fire upon the hearth'.[90] The fire in Symon's account is symbolic of life, and provides the only indicator that someone could live in such a place. The lack of fire, and the influence of the light source, is remarked upon often by these social commentators. It is portrayed as essential to the quality of life of these poor families living through the plight of industrial drudgery.

Similar ideas may be read through John Barton's treatment of the Davenport family in *Mary Barton* after their life is torn apart by the fire at Carsons Mill. John is cast into despair by the scenes he witnesses. After George Wilson requests that John help him aid the family, the pair walk into the cellar home where:

> [Q]uickly recovering themselves [from the smell], as those inured to such things do, they began to penetrate the thick darkness of the place, and to see three or four little children rolling on the damp, nay wet brick floor, through which the stagnant, filthy moisture of the street oozed up; the fireplace was empty and black; the wife sat on her husband's chair, and cried in the dark loneliness (p. 55).

Again the importance of light to the urban poor is recognised, as this scene's *chiaroscuro* is dominated by darkness. The scene reads similarly to the accounts of the social commentators quoted above. Wilson and Barton are greeted by the sheer impenetrability of the place. It is a similar scene to the aftermath of Boucher's suicide in *North and South* (1855)*,* as we are told that: 'Mrs Boucher was sitting in a rocking-chair, on the other side of the ill-redd-up fireplace; it looked as if the house had been untouched for days by any effort at cleanliness.'[91] In both cases the family has had the patriarch struck down, resulting in an absence of light and hope. The poor become separated from the higher classes by their inadequate light. Gaskell suggests that the poor illumination is only 'darkness to strangers' (p. 58); there is a separation of perception that only becomes apparent once one crosses social boundaries.

The lack of true sunlight in these dwellings, as the rapidly expanding cityscape cast its shadow over smaller homes, emphasised the importance of fire as a supplement to poor natural light. There was a law dating back to 1189 that attempted to ensure that a regulated amount of natural light would be present in a property, yet this became impossible to police in the dark and shadowy industrial cities of the nineteenth century. The law was amended in 1832, seven years prior to the setting of

[90] J.C. Symons quoted in Friedrich Engels, *The Condition of the Working Class in England 1845,* pp. 73-74.
[91] Elizabeth Gaskell, *North and South* (London: Oxford University Press, 1934) p. 355.

Mary Barton, to state that if one had enjoyed a specific quantity of natural light for a period of twenty years or more, then 'the right thereto shall be deemed absolute and indefeasible'.[92] Of course, this was of no use to those who had moved to industrial areas to secure work, and merely resulted in the rich having easier access to more natural light. Combined with the Window Tax, which wasn't repealed until 1851, it meant that fire and artificial light were often held in higher esteem than the impossible to reach natural light. There was something tangible to the light of the fire, within the home it was a miniaturization of the processes at work in the industrial revolution; families could take pride in their hearth, as the close link between firelight and the domestic individual continued to grow.

The variability of fire's blaze, and its importance in the home, insinuates social division through the imagery of different firesides. The fire of the Davenports' dingy cellar home is weak and fragile, especially when compared to the Carsons', described when George Wilson visits: 'So he was ushered into a kitchen hung round with glittering tins, where a roaring fire burnt merrily, and where numbers of utensils hung round, at whose nature and use Wilson amused himself by guessing' (p. 61). As the Davenports' fire struggles in poverty, so the Carsons' flourishes under prosperity. Their fire is not solely at the centre of the home, as it is in the poorer cellar dwellings; it is in the kitchen, and presumably just one of many. There is a spatial divide between rich and poor; the Davenport's cellar dwelling, and their hearth, must be multipurpose due to their situation. Within the light of their hearth they must eat, cook, work and relax, whereas the Carsons' home separates these activities into different rooms. The poor family's agency is limited by the confines of the essential hearth's qualities. Wilson cannot comprehend the utensils arranged around the kitchen fireplace (p. 61), so much so that he 'amuse[s] himself by guessing' their nature and function while waiting to be seen (p. 61); they are, much like the 'merrily' burning fire, luxuries in comparison to the hearth fires of the scarcely furnished homes of the poor. He is struck by the extravagance, and apparent uselessness, of the utensils that hang around the fire. The Carsons themselves have removed themselves from their fire, as in all likelihood their servants tend to fires, especially in the kitchen. It is an extravagance to have more than one fire in comparison to the life-giving qualities of

[92] Chris Otter, *The Victorian Eye,* p. 70.

the cellar hearths, Gaskell's depiction of Wilson's confusion an indicator of the effect the class divide has on perception.

Metaphoric weight may not only be found in the differences between fires in Gaskell's texts, but also in the contrast between different forms of artificial light. The difference between the Davenports' fire and the Carsons' in *Mary Barton* is an example of the comparative nature of the history and perceptions of artificial light within this period, yet Gaskell wrote *Mary Barton* at a time when Gaslight was becoming more prevalent on the streets and in industrial spaces, which further increased juxtapositions of lighting. In order to buy the Davenports' supplies John Barton moves from their cellar towards the shops on the street, where Gaskell places him within an aperture of illumination. The movement between the two spaces suggests the disparity in class and quality of life, the squalidness of the cellar dwelling contrasting wildly to the garishness of the gas-lit street. As Barton leaves the darkness behind to buy the poor family essentials, he moves into a space that helps define the huge divide he observes between social classes, one that drives him towards monomania:

> It is a pretty sight to walk through a street with lighted shops: the gas is so brilliant. The display of goods so much more vividly shown than by day, and of all shops a druggist's looks most like the tales of our childhood, from Aladdin's garden of enchanted fruits to the charming Rosamond with her purple jar (p. 58).

The huge contrast between the light of the fire and the light of gas bewilders John, just as he is bewildered by the possibility that such extremes can exist in such close proximity. Jill L. Matus acknowledges Barton's growing awareness of the gulf between rich and poor as a 'fixation […] that becomes a pathological condition'.[93] The two different light forms represent completely different worlds; the light of the fire is a symbol of the urban poor, of the struggle and harsh realities of their life, yet gaslight carries completely different connotations. The associations of consumerism and effulgence of gas, as the shops leer through the darkness, are an absolute juxtaposition to the dingy cellars of the poor.

Barton's feelings of injustice regarding the social and illuminatory contrasts are made explicit by Gaskell: '[H]e felt the contrast between the well-filled, well-

[93] Jill L. Matus, '*Mary Barton* and *North and South'* in *The Cambridge Companion to Elizabeth Gaskell,* ed. Jill L. Matus (Cambridge: Cambridge University Press, 2007) p. 32.

lighted shops and the dim gloomy cellar, and it made him moody such contrasts should exist' (p. 58). There is a layered infrastructure to perceptions of illumination during this period, as gaslight was still a relatively new presence on the streets. The light of gas was garish and vulgar in comparison to the warm glow of firelight; Barton's main discontent with the light is based on the disparity between the amount of light wasted on the streets, and the need for it in dark, fire-lit cellar dwellings. Gaslight is a much more focused form of firelight; it still holds the power of fire, yet its light is more processed and artificial. This may also be seen in Gaskell's *North and South*; two different worlds overlap in scenes that take place in the train station as the traditional is invaded by modern architecture and illumination. Train stations by their very nature are liminal spaces; it is not a space to exist in, but a space to transition through. It stands as a symbol of the transient nature of life in the Industrial Revolution and a sign of encroaching modernity. The station's gaslight is 'vivid', Margaret Hale 'going into the full light of the flaring gas inside to take the ticket'.[94] In gaslight people may be observed and regulated, caught in the vision of social scrutiny and order. Gas lacks the natural passion and aura of firelight, instead it flares and illuminates people with a 'full light.' This is particularly appropriate to Margaret's circumstances in this scene, as gaslight has the potential to expose her meeting with naval deserter Frederick, which it later does as Leonard recognizes Frederick in its light. The change of light is representative of the changing nature of life in industrial Britain; artificial light's role within society was evolving, its presence in Gaskell's fiction an indicator of how it was ushering in a new era of vision and society that began to highlight class divisions.

Patsy Stoneman suggests Gaskell conceived John Barton as her '"tragic […] hero." As a working-class father [and] proponent of a "female ethic"'.[95] His role as tragic hero, and his connections with fire, suggest potential interpretations of him as a model of Prometheus, who stole fire for humanity and was ultimately punished for it through being chained to a mountain. Northrop Frye discusses Prometheus as a tragic hero, and explores tragic heroes' relationship with their surrounding society: 'Tragic heroes are so much the highest points in their human landscape that they seem inevitable conductors of the power about them, great trees more likely to be struck by

[94] Elizabeth Gaskell, *North and South,* p. 315.
[95] Patsy Stoneman, *Elizabeth Gaskell* (Manchester: Manchester University Press, 2006) p. 55

lightning than a clump of grass.'[96] John Barton is a conductor of power within his society; he is focused on helping the Davenports, and impassioned in his pursuit of a better quality of life for his colleagues and neighbours. Consider how vehemently he rallies for improvement to living conditions in the Union meeting of Chapter XVI:

> It makes me more than sad, it makes my heart burn within me, to see that folk can make a jest of striving men; of chaps who comed to ask for a bit o' fire for the' old granny, as shivers i' th' cold; for a bit o' bedding, and some warm clothing to the poor wife who lies in labour on the damp flags; and for victuals for the childer, whose little voices are getting too faint and weak to cry aloud wi' hunger (p. 166).

Again, images of fire and flame abound within his passionate plea to the Unionists. The central focus of his demands is the need for warmth, and the striving of the lower classes to provide it for their families. Fire is so vital that it is being begged for by the impoverished, something that makes Barton's heart 'burn' within him. The tragedy of Barton is, however, that this fire will eventually devour him, leaving nothing; he is willing to sacrifice some of his little money to secure the Davenports' light and life which only adds to his monomania, something that is reflected in his textual relationship with fire. Within the text he transitions from having a 'latent fire' in his eye (p. 12) early in his tragic journey, to eventually, in one of the last scenes we see of him and his hearth, sitting 'by the fire; the grate, I should say, for fire there was none. Some dull grey ashes, negligently left, long days ago, coldly choked up the bars' (p. 306). Barton has transcended almost the entire range of fire's universal metaphors, beginning fiery and impassioned, yet ending the story burnt out and dying. The value of fire and its benefits to mental and physical health within such a rapidly changing environment result in its displacement from a simple position of repose into a gift, and something that can be embodied.

John Barton embodies fire's attributes and qualities thanks to his social circumstances. Gaskell portrays fire as an element that is closely linked to the urban poor; it becomes so synonymous with life itself that it functions as both essential to survival and becomes a symbol of their struggle. Fire is most often associated with more morally ambiguous characters, such as Jem Wilson, or the tragic hero John Barton, as its symbolic variability allows for a constantly shifting visual representation of their flawed morality and changing emotion. Bachelard reflects on

[96] Northrop Frye, 'The Mythos of Autumn: Tragedy' in Arthur Coffin ed. *The Questions of Tragedy* (New York: Edward Mellen Press, 1991) p. 168.

the link between the individual and fire: 'Fire smolders in a soul more surely than it does under ashes.'[97] Fire holds a symbiotic relationship with those in industrial squalor; it can burn within characters, as it does in John Barton, representing his passion but also suggestive of the capacity to burn up and consume him. The calm reverie of repose before the fire is amplified by social circumstance; now reverie is indicative of the delicate state of existence in such turbulent poverty. The fire comes to represent the stages between life and death, and the fragility of life itself. It moves from reverie to reflection, whereby its sparks and flames suggest the possibilities of ascendency and purification, while also suggesting the potential of threat and admonishment through its flames.

Nancy Henry suggests: 'Gaskell's fiction is preoccupied with questions of social transformation. Her work as a whole contrasts the models of change: abrupt and violent on the one hand, slow and continual on the other.'[98] These models of change are encapsulated within the qualities and attributes of firelight. Fire can blaze quickly and violently - an attribute charged by gaslight and isolated within in its lamps - yet also burn with a slow and concentrated flame. It is ultra-living, and can therefore represent varying degrees of emotion and atmosphere. It may relieve and punish, it may inspire reverie, and contentment, but also ignite fierce passions.

[97] Gaston Bachelard, *The Psychoanalysis of Fire,* p. 13.
[98] Nancy Henry, 'Elizabeth Gaskell and Social Transformation', in *The Cambridge Companion to Elizabeth Gaskell,* ed. Jill L. Matus (Cambridge: Cambridge University Press, 2007) p. 148

1.4 Fire and Reverie in Industrial Desperation

In her study of daydream and reverie, Meta Regis states that:

> Reverie models take two approaches. They tend either to stress daydreaming as occurring positively in states of reverie, in the sense that one is likely to engage in daydreaming when one is musing, or else conceptualise daydreams to occur in reverie because they somehow do not satisfy the criteria for instrumental thinking.[99]

Regis suggests two distinct models of reverie, as something that can occur 'positively', and as something that can refigure daydreams as thoughts that do not fall into the criteria of 'instrumental thinking'. This reads as a modern, psychoanalytical review of eighteenth-century French writer Antoine de Rivarol's supposition that 'to lose one's self in reverie, one must be either very happy, or very unhappy. Reverie is the child of extremes'.[100] To Bachelard, who directly addressed the notion of reverie in *Poetics of Reverie,* the psychological process is something that can be used to escape reality:

> The demands of our *reality function* require that we adapt to reality, that we constitute ourselves as a reality and that we manufacture works which are realities. But doesn't reverie, by its very essence, liberate us from the reality function? From the moment it is considered in all its simplicity, it is perfectly evident that reverie bears witness to a normal, *irreality function.*[101]

Bachelard suggests that reverie can 'liberate' us from reality; it is a means of both reflection and escape, a similarly dual model to that defined by Regis. Fire inspires reverie; its very nature and qualities remind us of our own potential to ascend or descend in social and personal order. Fire embodies the extremes that Rivarol talks of; as may be witnessed through the flowing change of reverie, and qualities of life, in Elizabeth Gaskell's fiction. Mark Winborn suggests reverie can encompass 'states of immersion and connection', yet also offer 'states in which an absence of flow, discomfort, disconnection, or irritation dominates'.[102] Fire reflects the sway of reverie

[99] Meta Regis, *Daydreams and the Functions of Fantasy* (Basingstoke: Palgrave Macmillan, 2013) p. 58.
[100] Antoine de Rivarol, *Ouevres Complétes De Rivarol,* p. 159.
[101] Gaston Bachelard, *The Poetics of Reverie,* p. 13.
[102] Mark Winborn 'Watching the Clouds: Analytic Reverie and Participation Mystique' in *Shared Realities: Participation Mystique and Beyond,* ed. Mark Winborn (Oklahoma: Fisher King Press, 2014) p. 81.

from one extreme to the other, Bachelard exemplifying this in his vision of fire as a metaphor that can 'shine in paradise [and] burn in hell'.[103]

Through Gaskell's fiction we have so far seen the fireside as a place of repose in *Cranford*, a position in which the occupants of its light can partake in reverie quite willingly, and in *Mary Barton* as a place of intense desperation, as the reveries become more intense and passionate. The fireside is a place in which to take comfort, and a symbol of life itself, yet there is a further stage of flame-reverie that can be witnessed in Gaskell's novels, whereby fire breaks the bounds of its hearth. If, as Bachelard suggests, a dying individual looks into the embers of a failing fire and sees only hopelessness, then the person, or indeed group of people, who looks into a blazing inferno experiences an extremely different kind of reverie.

In *Ruth* (1853) we see another progression of the fluidity of extreme reverie, as this time it surpasses *Cranford's* calm repose, and John Barton's Promethean embodiment of fire, and instead shows a more overtly tragic mania. Arguably the archetypal fallen woman, Ruth's fall from grace revolves around the stigma of illegitimacy and class relations. Audrey Jaffe has raised concerns about the inconsistencies of Gaskell's attempts to make Ruth a sympathetic character. She suggests that Ruth's unawareness of her actions, which is meant to imply innocence, instead portrays her as an ignorant and passive character, contrary to Gaskell's ambitions to show the fallen woman in a new way.[104] Certainly, her fall is less tragic than that of John Barton, whose tragedy is emphasised by his own selflessness of action and belief. He comprehends that his fire is burnt out, and understands why; he directly acknowledges the gulf between rich and poor, the role his wife played in the quality of his life, as well as the potential of his daughter to be the light of the hearth. The portrayal of Ruth's fall, while similar in its relationship with artificial light, shows her as more victim than hero. She cannot provide light like John Barton, but instead inhabits it in a much more passive way.

When we are first introduced to Ruth, Gaskell gives a very clear description of the space and light she resides in:

> The lofty roof was indistinct, for the lamps were not fully lighted yet; while through the richly-painted Gothic window at one end the moonbeams fell,

[103] Gaston Bachelard, *The Psychoanalysis of Fire,* p. 7.
[104] Audrey Jaffe, '*Cranford* and *Ruth'* in *The Cambridge Companion to Elizabeth Gaskell,* ed. Jill L. Matus (Cambridge: Cambridge University Press, 2007) pp. 46-58.

> many-tinted, on the floor, and mocked with their vividness the struggles of the artificial light to illuminate its little sphere.[105]

There is a purity that emerges through this description thanks to moonlight's associations with beauty and chastity. The space Ruth inhabits is one of serenity, marked by the natural light of night, setting her up as the antithesis to artificial light. This notion is elaborated upon by Mr. Bellingham's first meeting with Ruth, as he begins to draw comparisons between her and Miss Duncombe based on the opposition of natural and artificial; Ruth, 'habited in black up to the throat, with the noble head bent down to the occupation in which she was engaged, formed such a contrast to the flippant, bright, artificial girl who sat to be served with an air as haughty as a queen on her throne' (p. 11). In comparison to this artificial girl, Ruth is the moonlight. She is pure and untainted, and has lived honestly in comparison to Miss Duncombe whose class has given her a sense of entitlement. The contrast of light, with Ruth as the pale and pure celestial light, and Miss Duncombe as something 'bright' and 'artificial' emphasises the fall that Ruth is to go through within the novel; it indicates her fragility as different artificialities threaten to weaken her very natural, yet pale light.

The once pure and serene Ruth, the girl who was associated more with the natural lucidity of moonlight as opposed to artificial forms of illumination, comes to associate herself more with fire. Gaskell writes 'her heart felt at times like ice, at times like burning fire; always a heavy weight within her' (p. 189). Her transition from moonlight to firelight, and from ice to fire help to embellish her position as fallen woman and emphasise her lessening sense of self. Ruth's own realizations of her fall, and her passivity, are strongly reinforced in depictions of her reveries before the fireside. Her reflection is far more intense in comparison to Matty Jenkyns's, as Gaskell emphasises her state of mind:

> Ruth's sense of hearing was quickened to miserable intensity as she stood before the chimney-piece, grasping it tight with both hands – gazing into the dying fire, but seeing – not the dead grey embers, or the little sparks of vivid light that ran hither and thither among the wood-ashes – but an old farm house and climbing, winding road, and a little golden breezy common, with a rural inn on the hill-top, far, far away (p. 189).

[105] Elizabeth Gaskell, *Ruth,* (London: Chapman and Hall, 1855) p. 10. All further references to this work shall be given in body of text, unless otherwise stated in footnotes.

Unlike Matty's reverie, Ruth's takes place in the face of a 'dying fire'; she is inspired to hopelessness, not release like Miss Matty's spiraling flames suggest to her. She is cast into the past by the fire, thinking of 'an old farm house', which causes her to 'grasp' the chimney-piece in desperation. In her 'miserable intensity' she physically holds onto the one thing that may be able to secure her perception, the fireplace. Ruth does not find her salvation within the light of the flames, instead they highlight her past, emphasising the futility of her situation, without any purification similar to Miss Matty's. The fire in this scene causes her reverie to refigure the reality of the cold, dead embers into the desire to exist in an idyllic, peaceful home; it is an example of the reflexive nature of fireside reverie, one that can imbue its own image upon the individual in reverie. It is a similar portrayal of depression to a scene prior to Boucher's suicide in *North and South,* as he is described as:

> [S]tood, with both hands on the rather high mantel-piece, swaying himself a little on the support which his arms, thus placed, gave him, and looking wildly into the fire, with a kind of despair that irritated Higgins, even while it went to his heart.[106]

Boucher is engaged in another intense fireside reverie, as his self is burned up by his own wild thoughts. As if still consumed by the flames of thought, Boucher douses the reverential fire within himself, and commits suicide by drowning. The drowning implies extinguishment of enflamed passion due to water's dyadic symbolic relationship with fire. In a letter to Charles Dickens concerning the deaths in *North and South,* Gaskell revealed that every death was 'beautifully suited to the character of the individual',[107] suggesting Boucher's death by drowning was profoundly linked to a character that desired to extinguish his own despair.

Dickens, in *Great Expectations*, uses a similar example of fire symbolism, and absolute consumption through self-reflection. The death of Miss Havisham, and Krook's spontaneous combustion in *Bleak House*, are both fireside scenes that suggest destruction through reverie. When Pip leaves Satis House late in the novel, he decides to take one final look into the room of Miss Havisham, where he sees her 'seated in the ragged chair upon the hearth close to the fire'.[108] With the weight of her discussion with Pip, as well as the countless other burdens placed on her mind over

[106] Elizabeth Gaskell, *North and South* (London: Oxford University Press, 1934) p. 183.
[107] Elizabeth Gaskell, *The Letters of Mrs. Gaskell,* ed. J.A.V. Chapple and Arthur Pollard (Manchester: Mandolin, 1997) p. 324
[108] Charles Dickens, *Great Expectations,* p. 401.

the years, she sits in intense reverie, until in a highly symbolic act she is immolated in the flames of her own fire, reverie literally consuming her mind and body. Pip sees: 'a great flaming light spring up. In the same moment, I saw her running at me, shrieking, with a whirl of fire blazing all about her, and soaring at least as many feet above her head as she was high.'[109] Miss Havisham's immolation is redolent of the 'call of the funeral pyre' Bachelard sees in the fireside reverie of the 'fascinated individual': 'For him destruction is more than a change, it is a renewal.'[110] At this point, Miss Havisham's interior conflict is released. Much like Miss Matty sending her problems up the chimney, Miss Havisham's fireside reverie provides her with something much more than destruction - she finds potential of renewal in the flames. When she regains consciousness, she is lucid enough to be visibly filled with regret, and in her new-found awareness urges Pip to show Estella her sorrow that she has deeply affected the girl. She finds rejuvenation in her consumptive fireside reverie. She repents, and implores Pip to tell Estella she forgives her, as well as leaving much of her money to Estella and Herbert Pocket.

Extreme Reverie and the Public Spectacle of Factory Fires

Paul Fyfe suggests that 'Fires in the industrial city loomed large in the popular imagination as ready metaphors for the frenzy of England's industrial growth in the first half of the Nineteenth Century.'[111] Industrial fires took attributes that Bachelard marks as essential to flame-based reverie and symbolism, namely the mutability and change that fire suggests, and allowed them to flourish on a larger scale, encouraging something more communal than the private domestic reveries discussed previously. Fyfe's analysis of industrial fires as ready metaphors is corroborated by Gaskell's visions of them. The decimating fire at Carsons' Mill in *Mary Barton* is a catalyst for much of the plot and a massive indicator of social change, as well as being one of the most striking visual scenes in a novel filled with depictions of claustrophobic domesticity.

Fyfe suggests that such fires were prevalent during early nineteenth-century periods of industrialisation due to how 'industrial construction far outpaced civic

[109] Charles Dickens, *Great Expectations,* pp. 401-402.
[110] Gaston Bachelard, *The Psychoanalysis of Fire,* p. 16.
[111] Paul Fyfe, 'Accidents of a Novel Trade: Industrial Catastrophe, Fire Insurance and Author(s)', in *Nineteenth Century Literature,* Vol. 65, no. 3 (December 2010) p. 316

planning and oversight, factories suffered from haphazard operation and imperfect fire-prevention techniques, and political agitation brought unpredictable dangers'.[112] Fyfe also details the number of fires that happened in the big industrial cities such as Manchester; he notes the 'disturbing prevalence of urban-industrial fires', drawing a direct comparison between depictions of fires in the news and the mill fire in *Mary Barton.*[113] Robin Pearson also acknowledges that in Manchester alone, by the mid 1820s, there were 28 fire insurance companies operating in the city.[114] Fire, potentially tamed by the hearth, was much more of a threat in public spaces.

Intense personal reveries are externalized and objectified by factory and mill fires; the fire breaks the bounds of the hearth and comes to influence mass social reveries instead. The mill fire of *Mary Barton* takes all of the acute attributes of fireside reverie – the will to change, rejuvenation and purification – and exaggerates them into a public spectacle. It is implied within *Mary Barton* that the fire was an act of arson, a case of the workers fighting the fire of industry with the fire of revolution. Paul Fyfe suggests: 'Within the social cosmology that Gaskell imagines within her novel, there are clear motives for someone to have ignited the blaze', concluding that Jem Wilson 'may have destroyed Carsons' Mill as well as the son and heir'.[115] In *Discipline and Punish,* Michel Foucault notes that, in the opinion of the Fourierists, crime can have a positive value within society. If public spectacle could be distinctly authoritarian, then so too could crime be 'a weapon against it'.[116] Foucault suggests that crime 'manifests a fortunate irrepressibility of human nature', highlighting that according to the Fourierists it should be seen as an 'outburst of protest in the name of human individuality'.[117] Such ideas suggest that crime was an oppositional reaction to authoritarian forces that threatened to eliminate personal identity and individuality. If the fire was indeed an act of arson against the Carsons' Mill, this suggests a possible desire to create an image of the extreme contrasts between social classes through the images of the empty hearths of the poor and the blazing mill. The mill fire still

[112] Paul Fyfe, 'Accidents of a Novel Trade: Industrial Catastrophe, Fire Insurance and Author(s)', pp. 318-319
[113] Paul Fyfe, *By Accident or Design: Writing the Victorian Metropolis* (Oxford: Oxford University Press, 2015) p. 101.
[114] Robin Pearson, *Insuring the Industrial Revolution: Fire Insurance in Great Britain, 1700-1850* (Aldershot: Ashgate Publishing Limited) p. 195.
[115] Paul Fyfe, *By Accident or Design: Writing the Victorian Metropolis*, p. 117-118.
[116] Michel Foucault, *Discipline and Punish,* trans. Alan Sheridan (London: Penguin Books, 1991) p. 289.
[117] Michel Foucault, *Discipline and Punish,* p. 289.

maintains the same basic qualities of fireside reverie due to the attributes of the light source itself. Yet by bringing the power of fire into the public gaze, and making a spectacle of it, reveries were amplified and emboldened in its new social context and the actual power of the blaze. It was no longer something to be controlled and nurtured as a provider of life, but a powerful force that broke free from the hearth, the value of its reverie amplified by the overwhelming scale of the inferno.

There is a respect for the flames that can be seen in Gaskell's description of the mill fire; the blaze holds sway over its mass of observers just as much as a hearthside reverie captures the individual. When Mary and Margaret arrive at the scene of the fire:

> Mary almost wished herself away, so fearful (as Margaret had said) was the sight when they joined the crowd assembled to witness the fire. There was a murmur of many voices whenever the roaring of the flames ceased for an instant. It was easy to perceive the mass were deeply interested.[118]

The language Gaskell uses conveys an audience mesmerized by the sight before them, captivated in a social reverie; they 'witness' as their consciousnesses congeal into one great 'mass'. There is a connection between the 'murmur' of voices and the 'roar' of the flames as they become one in their indication of the crowd's fascination. For Margaret, due to her impending blindness, this may be the last time she gets to witness such a spectacle. Gaskell writes that the 'sea of upward-turned faces moved with one accord' (p. 47). Mary has an intense 'desire she had honestly expressed of seeing a factory on fire' (p. 46). Mary yearns for change; the excitement of a factory fire an intense spectacle on the grey and dull industrial landscape of Manchester. The sight and qualities of the fire still inspire similar reveries to those of the fireside, yet in a greatly exaggerated manner. There is a fear that borders on respect for the fire in Gaskell's description of 'magnificent terrible flames' (p. 47) and their 'devouring' and 'invading' nature (p. 49). The mill fire speaks for the loss of control over individual agency, as the act of lighting, and the intimate act of repose before the hearth, is displaced by the terrifying nature of fire unbound. The crowd is treated as one solid unit, Gaskell describes it in a way that portrays them as one breathing organism: 'there was a pressure through the crowd, the front rows bearing back on those behind, till the girls were sick with the close ramming confinement. Then a

[118] Elizabeth Gaskell, *Mary Barton,* p. 47. All further references to this work shall be given in body of text, unless otherwise stated in footnotes.

relaxation, and a breathing freely once more' (p. 48). Gaskell states that in the face of the Mill fire, 'The people were sick with anxious terror' (p. 49); although this is a very different image from the calm repose of fireside reverie, it still encapsulates the will to change that is almost always present in the self-reflection of hearth reverie. Within *Mary Barton,* fire is a constant indicator of mutability - thanks both to its natural effects on its environment and subjects, and its close associations with renewal - which make it an important metaphor for a society undergoing such a radical upheaval under the dominion of the Industrial Revolution.

The spatial geography of the mill fire's wake creates further emphasis on the flames' connotations of renewal through destruction. Paul Fyfe describes Gaskell's Manchester as a place where 'age and decreptitude are the combustible heartwood of the modernizing cityscape, and accident brings this paradox to light'.[119] The mill sits in the centre of the community, between east and west, old and new, rich and poor. Fire is what unites these contrasting spaces through its necessity within the household, its value to reverie, and now on a larger scale, through its unquestioning destructive threat. The Mill:

> [R]an lengthways from east to west. Along it went one of the oldest thoroughfares in Manchester. Indeed, all that part of the town was comparatively old; it was there that the first cotton mills were built, and the crowded alleys and back streets of the neighbourhood made a fire there particularly to be dreaded (p. 47).

This part of town is only 'comparatively' old; the rapid increase in new buildings and dwellings reinforce the drastic changes that the city is undergoing, and make the old seem even older. To the west and east of the factory sit public houses, pawnbrokers' shops and dirty provision shops on streets that are 'miserably lighted and paved' (p. 47). The fire, a symbol of transformation itself, erupts in the centre of this crucible of change and unites the city in a reverie before the mill.

The rapidity of development that towns and cities faced during the Industrial Revolution is exemplified in Gaskell's descriptions of 'a house which from its size, its handsome stone facings, and the attempt at ornament in the front, had probably been once a gentleman's house' (p. 47). This house stands as a relic of pre-industrial Manchester, a symbol of how harsh the reality of the change was, the beautiful townhouse repurposed into a 'gin-palace' with 'miserable squalid inmates.' (p. 47).

[119] Paul Fyfe, *By Accident or Design: Writing the Victorian Metropolis*, p. 104.

The past sits awkwardly alongside the modern, as a previously luxurious place is refitted as a nesting place of squalor and drunkards. The interior lights of the gin-palace make its occupants more obvious to those who gaze in from the outside, the windows framing the debauchery within. The Gin Palace's close vicinity to the Mill ensures the strength of the ladder lain down between them from the upper windows and allows George Wilson to be saved by Jem. In the face of fire, a symbol of the rapidity of change, it becomes a space where the gulf between classes is quite literally bridged in the light of the threatening blaze.

Gaskell considered using fire in a similar way in *North and South,* in a manner also suggesting the deterioration of class boundaries through destruction and renewal*;* writing to Marianne Gaskell she asked 'What do you think of a fire burning down Mr. Thornton's mills *and house* as a *help to failure?* Then Margaret would rebuild them larger and better and need not go and live there when she's married?'[120] Fire suggests immediate change, and the opportunity for resurrection following extinguishment. This idea never came to fruition, but it is interesting to see Gaskell's thinking when it comes to industrial fires. To her, the potential industrial fire in *North and South* functioned with a sense of renewal, similar to the domestic fires of *Cranford.* In the Preface to *Mary Barton,* Gaskell indicates her awareness of situations in revolutionary Europe, suggesting that she 'formed the state of feeling' in her image of Manchester based on 'confirmation from the events which have so recently occurred among a similar class on the Continent'.[121] Particularly in France, fire was used in reality in a similarly politically incendiary way. Writing on Thomas Carlyle's *The French Revolution,* Chris Vanden Bossche suggests that 'Fire is the most common and prominent metaphor in *The French Revolution,* almost always representing the uncontrolled spread of destruction: Feudalism is struck dead by fire'.[122] The mill fire of *Mary Barton,* undeniably a source of fascination and destruction, clearly leads more to misery than renewal, yet within its flames we can understand the kindling of John Barton's mania at class disparity and the genesis of his relentless pursuit of equality. As Jill L. Matus suggests:

> Perhaps the context of the fire more obviously suggests a conflagration between workers and masters personalized by John Barton's intense response

[120] Elizabeth Gaskell, *The Letters of Mrs. Gaskell,* p. 310
[121] Elizabeth Gaskell, *Mary Barton,* p. 6.
[122] Chris Vanden Bossche, *Carlyle and the Search for Authority* (Ohio: Ohio State University Press, 1991) p. 74

> to the plight of the working people, which becomes dangerous as he is associated with Chartism and trade unions – all that is 'wild and visionary.'[123]

As in Carlyle's text, fire was both an instigator and symbol of change in Gaskell's fiction; be it the very literal change of fire's destructive capabilities, or its capacity to act as a metaphor for the turbulent changes society was undergoing. The image of the mill fire is charged with connotations of destruction and misery, yet within such desperate circumstances, John Barton's tragic heroism is sparked, itself a reflection of fire's flames.

The Furnace of Revolution: Industry and Reverie

Gaskell's brooding description of the flame-drenched surroundings at the scene of Jem Wilson's arrest in the foundry furnace shows fire's complete transformation from the hearths of *Cranford* and *North and South* into its threatening, powerful antithesis. The foundry furnace casts a very different light to firesides and hearths, yet it is still innately fire. Its light seeps out of its confines and casts a red glare over all:

> Dark black were the walls, the ground, the faces around them, as they crossed the yard. But, in the furnace-house, a deep and lurid red glared over all; the furnace roared with a mighty flame. The men, like demons, in the fire and soot colouring, stood swart around, awaiting the moment when the tons of solid iron should have melted down into fiery liquid, fit to be poured, with still, heavy sound, into the delicate moulding of fine black sand, prepared to receive it. The heat was intense, and the red glare grew every instant more fierce; the policemen stood awed with the novel sight. Then, black figures, holding strange-shaped bucket-shovels, came athwart the deep-red furnace light, and clear and brilliant flowed forth the iron into the appropriate mould (p. 196).

Gaskell's foundry furnace is a Miltonian Hell; her depictions of the lurid red fires reminiscent of *Paradise Lost's* descriptions of Hell as 'one great furnace', whose flames offer 'no light, but only darkness visible'.[124] The tongues of fire in Gaskell's furnace do not illuminate, they only make the blackness more omnipresent. Through the close association of fire and the industrial workers, the foundry fire acts as a metaphor for the stoic desperation of such people; it is completely alien to the policemen who 'stood awed with the novel sight', yet within the light of its flames the

[123] Jill L. Matus, *Unstable Bodies: Victorian Representations of Sexuality and Maternity* (Manchester: Manchester University Press, 1995) p. 80.
[124] John Milton, *Paradise Lost* (Oxford: Oxford University Press, 2004) Book 1, ll. 61-62, p. 5.

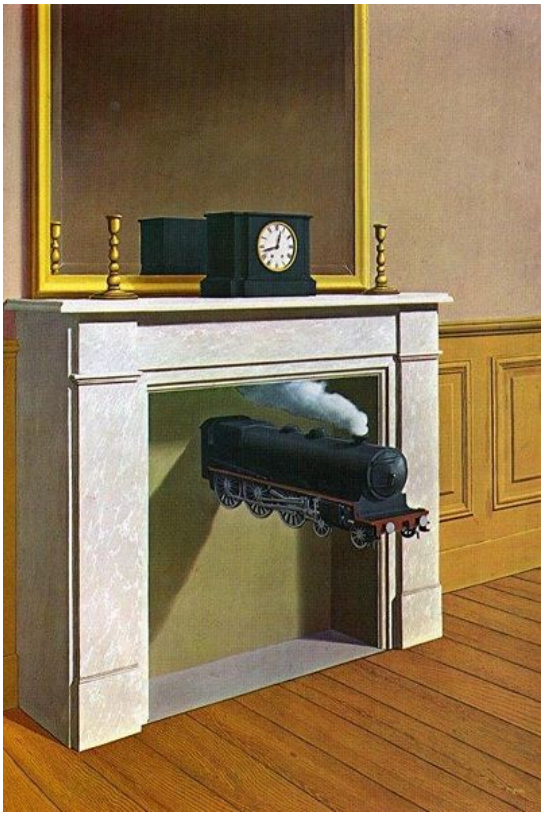
workers become ‘black figures’ and ‘demons’. They are dehumanized in its light, a potential metaphor for the power of industrial capitalism over its subjects and workers.

The text has reached the literal and symbolic heart of the Industrial Revolution; fire powers the factories and mills of Manchester – it creates life, yet also endangers it. The light of the foundry fire and its hellish symbolism is the antithesis of cozy fireside gentility and reverie. Fire is both a relic of the past and the heart of modern technology. The reverie that accompanies states of repose by the hearth is amplified by the strength of the flames, so that instead of a secluded, comfortable reverie, it acts as an embodiment of the social reverie and awareness that Gaskell’s works represent. In *Cousin Phillis,* we may also witness the combination of fire as a relic of the past and as something that powers the future. Paul Manning, who states that he ‘wanted nothing better than the blazing, crackling fire that sent a glow over all the house-place’ has his reveries disturbed by his father’s diagram of a new turnip cutter:

> I saw my father taking a straight burning stick out of the fire, and, after waiting for a minute, and examining the charred end to see if it was fitted for his purpose, he went to the hard-wood dresser, scoured to the last pitch of whiteness and cleanliness, and began drawing with his stick.[125]

The tamed fire, man’s first life-changing innovation, is further used to emphasise the technological changes during the period of industrial revolution. The dresser in this extract acts as a symbol of the old, of the past, and the impact that the burning stick has on it is reminiscent of the larger effects of fire in Industry. It acts as a tool to Paul’s father, who uses it to define and detail a new machine of his invention. René Magritte’s 1938 painting *Time Transfixed* also combines the twin ideas of fire as something archaic and of the future in a visual sense, as it envisions the steam train emerging from a domestic hearth; two distinctly different things that both share fire as their catalyst.

[125] Elizabeth Gaskell, *Cousin Phillis and Other Stories,* p. 183.



René Magritte, 'Time Transfixed', 1938

Elizabeth Gaskell's fiction uses firelight's variable blaze to provide a reflection of a wide array of mental and emotional states. From the gentle steadfastness of *Cranford,* and Matty Jenkyns's reverie and partnership with the fire, to John Barton's embodiment of the variable states of fire, as well as the blaze of social injustices seen in the Mill Fire and foundry furnace, Gaskell's fiction exemplifies fire's role as universal explicator. The poorer families, such as the Bartons and the Davenports, hold a much stronger affinity with the flames; their whole lives revolve around them – they must work with them in an industrial capacity and when at home must ensure their continued blaze in order to secure light, heat and perception. To the urban poor, fire was life itself, acting both as a necessity within the home but also an inspiring symbol of possibility. Taxation and regulation of other forms of light, both natural and artificial, resulted in fire often being the sole source of light within a dwelling, as corroborated by Engels's and Kay-Shuttleworth's documentation of the conditions of the working poor. In the more comfortable homes of her fiction, those of the Carsons in *Mary Barton,* and the Thorntons of *North and South,* fire is peripheral, not a necessity like it is to the lower classes. The gentility of the homes of *Cranford* allow fire to flourish in a space between these social ills, which allows for reflection on the encroaching modern world.

Chapter 2 – Candlelight

Petrus Van Schendel, ‘A Candle-Lit Interior’, 1853.

2.1 A Brief History of Candlelight: An Ancient Light in the Nineteenth Century

Candlelight's material and symbolic use began to change during the nineteenth century, as not only were perceptions of it affected by other artificial lighting developments in the period, but candles also began to evolve themselves; David J. Eveleigh describes the mid-nineteenth century as the candle's 'peak of development,' documenting the sixty-four different exhibitors of candles at the Great Exhibition of 1851 as evidence of this.[126] The candle carried its own historically cultivated associations following its widespread use over thousands of years prior to the nineteenth century, yet many of them became altered or embellished by its position within the spectrum of nineteenth-century artificial light.

The candle's true origin is difficult to establish. M. Luckiesh, in his book *Artificial Light: Its Influence on Civilization,* suggests that 'Many crude forerunners of the candle were developed in different parts of the world by different races'.[127] W.S. Orr suggests, however, that the earliest authentic evidence of candle use 'was furnished by Pliny in the 13th book of his Natural History',[128] establishing that candles were used in the earliest days of Roman civilisation. The candle has existed in some form or another for almost two thousand years, and garnered a greatly varied system of symbolism over this time. Although primarily a source of light, their use varied from ritual and spiritual purposes, to time-keeping. They were introduced to Christian churches in the year 274, where they began to become associated with ritual, St. Jerome describing them as an 'emblem of joy', and as 'a lamp unto his feet and a light unto his paths'.[129] According to Jane Brox the later Anglo-Saxon King Alfred the Great used beeswax candles for both their quality of light and their potential to be used as timekeepers. He would have several identical candles crafted for him, which were notched on the sides to denote chronological movement as the wax slowly melted.[130]

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[126] David J. Eveleigh, *Candle Lighting* (Buckinghamshire: Shire Publications Ltd.) p. 3.
[127] M. Luckiesh, *Artificial Light: Its Influence on Civilization* (New York: The Century Co, 1920) p. 27.
[128] W.S. Orr, *Orr's Circle of the Sciences* (London: Houston and Stoneman, 1856) p. 430.
[129] Francis Sellon White, *A History of Inventions and Discoveries: Alphabetically Arranged* (London: C. And J. Rivington, 1827) p. 156.
[130] Jane Brox, *Brilliant,* p. 10.

During the nineteenth century, there was a clash between the already-existing associations of candlelight, and new impressions that had been coerced into existence by comparisons with emerging light sources. This is not to suggest candlelight was completely consigned to history by its successors, as Chris Otter asserts: 'technologies, as they become more embedded and integrated into everyday practice, become superimposed over, and slightly displace, older artifacts'.[131] Instead, the candle was amalgamated into the spectrum of nineteenth-century illumination; its close link with humanity became yet more pronounced as its personal light was challenged by the powerful vision of networks of gas and electric. Also, when in the candle's limited aura of light and vision, an individual could contemplate, work and create – without being contained by the close-knit social environs of the fireside. As Wolfgang Schivelbusch argues, the relationship between humanity and the candle was innately psychological:

> In the torch, people experienced the elemental, destructive power of fire – a reflection of their own still-untamed drives. In the candle-flame, burning steadily and quietly, fire had become as pacified and regulated as the culture that it illuminated.[132]

Within the figure of the candle we may witness the movement from the primitive and untamed to the cultured and civilised. The candle holds a deep psychological resonance with the individual and their position within society or culture, infinitely more so than the light of gas or electric. Its light is personal, the limited circumference of its aura ensconcing the bearer or occupant of its light within a field of illumination, the portability of its light encouraging ideas of agency and improved perception.

Candles were precious and expensive commodities in the years before the nineteenth century, yet during the period, improvements in production and materials meant that candles were more reliable, cheaper and therefore widespread. There were many different types of candle available to the public at this time: rushlights were homemade, tallow candles were the cheapest commercially available, with beeswax being the more expensive choice, and spermaceti candles became popular following the development of the whaling industry in the eighteenth century. Virginia Mescher begins her study of different types of candle available in the period by outlining the benefits of candles to the people of the nineteenth century:

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[131] Chris Otter, *The Victorian Eye,* p. 261.
[132] Wolfgang Schivelbusch, *Disenchanted Night,* p. 6.

> With candles, one did not have to be concerned with spilled lamp fuel; broken or exploding lights or replacement of chimneys, wicks and other lamp hardware. Candles also offered portability and were more economical than lamps.[133]

Mescher highlights two important factors in creating the candle's nineteenth-century associations: its reliability and its agency as a uniquely portable light source. She also further emphasises the new availability of tallow candles: 'Since there were so many manufacturers of candles, commercially made candles were readily available and fairly inexpensive', highlighting the American cost of tallow candles as between sixteen and twenty-five cents per pound or two and two and a half cents per candle.[134]

A person's economic position would be reflected in the type of candles used and the quality of light they inhabited. During the nineteenth century, 'many of the rural poor made their own form of candle, known as rushlight'.[135] The wick was generally an intertwining of rushes that were then rolled in animal fat or grease to create the body of the candle. The resulting light was poor and the material quality of the candle fragile. Rushlights were exempt from taxes levied upon both wax and tallow candles during the eighteenth and early nineteenth centuries, policies that also outlawed home-made wax or tallow candles.[136] Charles Dickens described the rushlight in *Great Expectations* as 'an object like the ghost of a walking cane, which instantly broke if its back were touched'.[137] Both its light and material were weak, and cast the poor into much darker environments than the richer people of the period. Yet the rushlight further cemented the candle's unique significance, as being handmade encouraged intimate individual connections with the light source.

Different types of candle-material and production were distinctly associated with class and culture. Nineteenth-century periodical *The Mirror of Literature, Amusement and Instruction* states that 'In religious offices wax candles were used; for vulgar uses those of tallow'.[138] Roman beeswax candles continued to be used almost

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[133] Virginia Mescher, 'Dispelling the Darkness: Types of Candle and the Appropriateness of Each in the Nineteenth Century' (2008) from author's website http://www.raggedsoldier.com/candle_article.pdf [accessed on 13/6/15]
[134] Virginia Mescher, 'Dispelling the Darkness: Types of Candle and the Appropriateness of Each in the Nineteenth Century'
[135] Roger Fouquet, *Heat, Power and Light: Revolutions in Energy Sciences* (Cheltenham: Edward Elgar Publishing Limited, 2008) p. 192.
[136] A. Roger Ekirch, *At Day's Close: Night in Times Past,* p. 106.
[137] Charles Dickens, *Great Expectations,* p. 366.
[138] 'The Candle' in *The Mirror of Literature, Amusement and Instruction* ed. John Limbird, vol. IV (London: J. Limbaird, 1824) p. 345.

two thousand years after the fall of the Empire, yet their use was limited to the privileged, royalty, and to religious ceremonies. Lucy Lethbridge cites Thorsten Veblen's observations in 1892 on how beeswax candles became popular in the grand houses of America:

> [T]he attraction of old-fashioned beeswax candles to illuminate evening dinner parties was suddenly revealed when gas and electric lighting became widely available to the middle classes. The reason was said to be the rosy glow that candles cast, but behind it lay a snobbery about industrial mass production.[139]

Candles were a means to differentiate oneself from networks through their individuality, and to emphasise difference in wealth. Similarly costly were spermaceti candles. However, their use was still limited, combined factors of cost and lack of materials contributing to their rarity. The Industrial Revolution had a profound effect on the production and quality of candles. In 1834, Joseph Morgan created a machine that could mass-produce candles at a rate of around 1500 per hour.[140] His invention revolutionised the use of candles as mass production made them cheaper and more widely available to the public. Combined with developments in both paraffin and stearin wax, the mass production of the candle ensured its popularity as a light source.

In 1852, a period when gaslight was prominent in larger cities throughout Europe and North America, the light of one candle became the first British Parliamentary standard for light. It was the first attempted instance of trying to measure light by regulated means. However, as Otter points out, the unique individuality of each different candle made this an almost impossible task. Candles never burned identically, not even when mass-produced, leading 'exasperated photometrists' to declare that 'the candle was no more scientific a unit than the old "barleycorn"'.[141] Yet the candle endured even in the light of new illumination, and is still used in measuring the strength of torches and handheld lights in the twenty-first century. Otter notes that 'most late-nineteenth century Britons still relied on oil lamps

[139] Lucy Lethbridge, *Servants: A Downstairs History of Britain from the Nineteenth Century to Modern Times* (New York: W.W. Norton and Company, 2013) p. 8.
[140] Morgan's Patent Notice was printed in *The Leeds Mercury, Saturday March 25, 1837,* and suggested that the 'machine , which with Three men and Five Boys, will MANUFACTURE TWO TONS of CANDLES in TWELVE HOURS, begs leave to state that these Candles will be found far superior to home made in the ordinary way.'
[141] Chris Otter, *The Victorian Eye,* p. 159.

and candles',[142] pointing to candles' continued use in religious and romantic circumstances as a possible reason for the enduring trust in the lights.[143]

The continuing importance of the candle in the nineteenth century may be observed in how much attention Michael Faraday's first Christmas Lecture at the Royal Institution paid to the candle. Beginning a tradition that is still followed after more than 150 years, *The Chemical History of a Candle* was delivered in 1860, and published in *Household Words* in the same year. It was intentionally aimed at young people, for whom this standard of education was often scarce. Faraday chose to discuss the candle because of its availability and familiarity, stating that 'I make this experiment because you can make it well at home'.[144] Candles to Faraday were more than just lights, or indeed scientific tools; they were sources of inspiration. By explaining the chemical processes behind such a common object, Faraday attempted to inspire a similar fascination in his gathered audience: 'There is no better, there is no more open door by which you can enter the study of natural philosophy than by considering the physical phenomena of a candle.'[145] Faraday reinforced the significance of the candle in a period when gaslight was becoming more dominant in its hold on domestic and public spaces. There was something both scientific and spiritual about the candle, a kind of personality that distanced it from other contemporary light sources.

[142] Chris Otter, *The Victorian Eye,* p. 8.
[143] Chris Otter, *The Victorian Eye,* p. 261.
[144] Michael Faraday, *The Chemical History of a Candle,* ed. Frank A. J. L. James (Oxford: Oxford University Press, 2011) p. 26
[145] Michael Faraday, *The Chemical History of a Candle,* p. 1.

2.2. Candle Theory and its Symbolic Value in Literature

The candle's consistent popularity and use seems to owe much to its status as a flame-light. There was a trust in the light of a flame; it was regarded as 'the normal and natural type of light'.[146] Schivelbusch points out that trust in candlelight owed much to the public's reluctance to be part of a regulated and industrialised network of light.[147] By keeping their own light, and being masters of their own perception, the individual symbolically differentiated themselves from a networked and centralised supply.

To introduce these ideas in literature, it is worth examining the candle's representation of agency in *Great Expectations*. Once Pip leaves the warmth of the hearth and the light of Joe's forge, he proceeds to Satis House and is guided through the dark corridors by Estella and her candle. The clearest initial symbolic value of the candle is that of existing within a new light, the change in primary sources of illumination emphasising Pip's transition from his old life to his new. Pip says:

> We went into the house by a side door – the great front entrance had two chains across it outside – and the first thing I noticed was, that the passages were all dark, and that she had left a candle burning there. She took it up, and we went through more passages and up a staircase, and still it was all dark, and only the candle lighted us.[148]

The candle makes the contrast between light and dark much more obvious; it contains the two characters within its limited field of light and limits the narrative eye. The candle tends to restrict perception as much as it illuminates, as obscurity is made more solid through the frailty of the candlelight's boundaries with darkness. Consider how the candles are presented in Miss Havisham's dark room: 'Certain wintry branches of candles on the high chimney-piece faintly lighted the chamber: or, it would be more expressive to say, faintly troubled its darkness.'[149] Darkness surrounds the light of the candle, rather than being completely dispelled by it. Pip craves his own light; contrast this passage to where Pip earlier states 'I was never allowed a candle to light me to bed, and, as I went upstairs in the dark, with my head tingling […] I felt fearfully sensible of the great convenience that the Hulks were handy for me.'[150] The candle's

[146] Wolfgang Schivelbusch, *Disenchanted Night,* p. 167
[147] Wolfgang Schivelbusch, *Disenchanted Night,* p. 162
[148] Charles Dickens, *Great Expectations,* pp. 56-57.
[149] Charles Dickens, *Great Expectations,* p. 84.
[150] Charles Dickens, *Great Expectations,* p. 15.

light provides him with a sense of direction; his life changes once he has a candle to guide him, although not necessarily for the better.

The nature of candlelight symbolism suggests the fragility of the conceptual boundary between light and dark; its flame burns determinedly, and is linked with the passage of time, yet there is an ever-present threat of extinguishment. The candle only permits its light's inhabitants perception within a comparatively - at least in contrast to other lights of the century - small space, capturing occupants within its field of light. As Wolfgang Schivelbusch suggests, 'The candle and the oil-lamp were extremely *intimate* forms of light, as they only put out enough light to illuminate a small area'.[151] Schivelbusch's use of the word 'intimate' implies how important the spatial aspect of their light is. The candle-bearer is ensconced within their own private circle, separated from the darkness by a fragile aura of light. Candles affected shadows in a completely different way from the more modern techniques of lighting. There was a more intense relationship with darkness that cast objects into shade that were not directly within the field of the candle's light. A. Roger Ekirch comments of the light of a candle: 'Visibility was limited to an object's façade, not its top and sides.'[152] The dim light would have changed the look, colour and depth of familiar faces and furniture. Ekirch quotes an old French adage, 'By candle-light, a goat is lady-like'[153] as an example of how different things may appear.

However, the candle's portability and operation outside of a networked system of light should be emphasised also, as these contrasting ideas – that of the independence and agency of candlelight and the containing aspects of its light – are key to reading the light and presence of the candle within nineteenth-century texts. By suggesting the porous boundary between light and dark, the candle may be seen in literature to blur the boundaries of diametric concepts such as good and evil, known and unknown, and sane and insane.

Bachelard's Flame-Based Reverie, Lacan's Gaze, and the Candle

Gaston Bachelard's model of the candle is protean in its use, being at the same time an image of solitude, individuality, hope, and ascendency. In the flame of a candle, Bachelard writes, we see our own capability. 'Burn high, ever higher, to be sure you

[151] Wolfgang Schivelbusch, *Disenchanted Night,* p. 44.
[152] A. Roger Ekirch, *At Day's Close: Night in Times Past,* p. 111.
[153] A. Roger Ekirch, *At Day's Close: Night in Times Past,* p. 111.

give off light',[154] he expounds in a seemingly motivational epigram. He suggests, to what he calls the 'candle dreamer', or the person in the candle's light, that the candle is hope embodied. The rising verticality of the lick of candle-flame may inspire and reinvigorate, yet there is still an element of loneliness apparent in the light of the candle. It does not seem to be a light that may be shared in the same way as the collective reveries of fireside-light or the intense social practices of gas-lit urbanity.

Bachelard outlines ideas and theories that correlate almost directly with trends in nineteenth-century illumination. He describes the difference, psychologically and physically, between hearthlight and candlelight: 'The solitary flame has a character different from that of the fire in the hearth. The fire in the hearth may distract the keeper of the flame. A man who stands before a talkative fire can help the wood to burn; he places an extra log at the right moment' (p. 24). The candle negates this Promethean deed. Instead, 'the candle burns alone. It has no need of a servant' (p. 24). Unlike the reciprocal care involved in tending a hearth-fire, the candle, once lit, may be left to burn, although some degree of supervision for safety is required (trimming the wick etc.). The occupant of the candle's light is left in a much more personal type of illumination than a fire; the single flame provides an element of connectedness between light and person.

For Bachelard:

> [T]he electric lightbulb will never provoke in us the reveries of this living lamp. We have entered an age of administered light. Our only role is to flip a switch. We are no more than the mechanical subject of a mechanical gesture. We cannot take advantage of this act to become, with legitimate pride, the subject of the verb "to light" (p. 64).

To him, the candle is the 'living lamp,' a further indication of the intimate link between individual and their candle. He describes the 'pride' of lighting one's own life, and the impossibility of garnering that feeling from other more technologically advanced sources of light. It is worth turning to Gerard Manley Hopkins's poem 'The Candle Indoors' at this stage to further illustrate and exemplify Bachelard's arguments. The poem postulates a link between the candle and the spiritual:

> Come you indoors, come home; your fading fire
> Mend first and vital candle in close heart's vault;

[154] Gaston Bachelard, *The Flame of a Candle,* trans. Joni Caldwell (Dallas: The Dallas Institute of Publications, 2012) p. 3. Further extracts from this work will be given in the main body of text unless otherwise stated in the footnotes.

You there are master, do your own desire.[155]

For Hopkins' the candle is an embodiment of essential spirit. It is 'vital', not just necessary but *alive*. It warms and nourishes the individual, and encourages the thought that the individual is 'the master' of his or her own desire within the space of the candle's light. Technology later created a disconnection between human and light, as gas and electricity networks provided industrialised, networked illumination. This contrast, a uniquely nineteenth-century phenomenon, only serves to emphasise the individuality of the candle, as well as the agency it provided outside of corporate networks.

Jacques Lacan's theories on the Gaze are vital to understanding the operation of literary candlelight. Growing from his work on the stages of the Psyche, Lacan defined the Gaze as a relationship that is present between subject and object, or the viewer and viewed. Lacan bases his assumptions on his earlier work with the 'mirror stage', a psychological development in a child's life where he or she begins to realise that when looking into a reflective surface, they are actually seeing their own bodies. Lacan later developed this model into something more relatable to the psychology of vision, as he began to consider the mirror stage as something that represented a permanent structure of subjectivity, whereby there is a split between the psychoanalytic processes of the Imaginary and The Real. This discord between symbol and reality is at the heart of the Gaze. Lacan summarises this elusive tension: 'In our relation to things, in so far as this relation is constituted by the way of vision, and ordered in the figures of representation, something is transmitted, from stage to stage, and is always to some degree eluded in it—that is what we call the gaze.'[156]

The Gaze focuses on the relationship between the viewer and the object, and the anxiety that may occur when the viewer becomes aware that they themselves may become the object of a Gaze. It is as if the object is looking back, akin to the mirror stage, resulting in an anxiety brought about by the distorted relationship of viewer and viewed. Henry Krips describes the processes at work during Lacan's experience with the reflective sardine-can, the inspiration for his work on the Gaze. Sailing with a

[155] Gerard Manley Hopkins, 'The Candle Indoors' in *The Cambridge Book of English Verse 1900-1939* ed. Allen Freer and John Andrew (Cambridge: Cambridge University Press, 1970) p. 7, ll. 9-11.
[156] Jacques Lacan, *The Four Fundamental Concepts of Psychoanalysis,* trans. Alan Sheridan, ed. Jacques-Alain Miller (New York: Norton, 1998) p. 73.

group of fishermen, Lacan saw the can floating on the surface of the water, flashing in the light of the sun:

> In and of itself the object is of no significance, a shiny piece of industrial waste floating on the sea. But the physiological discomfort occasioned by the flashes of light from the can blends with and reinforces a qualitatively similar affect in the young Lacan that comes from a quite different source. To be specific, he experiences a feeling of discomfort, which, rather than physiological in origin, is occasioned by a lurking political guilt at his own privileged position in relation to the working class fishermen.[157]

The visual relationship between viewer and thing is not as simple as subject and object; indeed, each side of this relationship can influence perception. Krips highlights the deeper psychological reasoning behind Lacan's Gaze as being associated with the physiological discomfort at having your own gaze interrupted by flashes of light. At the heart of the Gaze relationship is the anxiety that surrounds loss of control. In such an environment, Lacan is disturbed as he is made hyper-aware of his own social class, thus distancing himself from the fishermen he is accompanying, as well as from any discernable land or safety, due to the interruption of his vision by the flashing can.

There is a clear uncanny quality to the Gaze as it directly acknowledges the threat of perceptual instability. Slavoj Zizek's account of Lacan's theory implies this uncanny link: 'the eye viewing the object is on the side of the subject, while the Gaze is on the side of the object. When I look at an object, the object is already gazing at me, and from a point at which I cannot see it.'[158] Within the candle itself there is a divergence of the relationship between subject and object, of bearer and recipient of the Gaze. By the nature of its light, the candle multiplies the role of 'object' within the structure; it both attracts the gaze yet enables the subject to achieve perception of other objects. The gaze is drawn towards the candle from the outside, yet in the aura of light it disperses, the gaze is then drawn to what is illuminated. By turning back to Gerard Manley Hopkins's 'The Candle Indoors' and its companion poem 'The Lantern out of Doors', we may see this subversion of the gaze relationship with regards to the candle. In 'The Candle Indoors', Hopkins writes:

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[157] Henry Krips, 'The Politics of the Gaze: Foucault, Lacan and Zizek' in *Culture Unbound*, Volume 2, 2010 p. 92.
[158] Slavoj Zizek, *Looking Awry: An Introduction to Jacques Lacan through Popular Culture* (Massachusetts Institute of Technology, 2000) p. 104.

> Some candle burns somewhere I come by.
> I muse at how its being puts blissful back
> With yellowy moisture mild night's blear all black,
> Or to-fro tender trambeams truckle at the eye.[159]

The light of the candle in this poem does not penetrate the darkness, but holds it off. It remains 'blissful' within the immediate aura of light, but beyond the darkness is made more visible. In 'The Lantern Out of Doors', he writes:

> Sometimes a lantern moves along the night,
> That interests our eyes. And who goes there?
> I think; where from bound, I wonder, where,
> With all darkness wide; his wading light.[160]

The candle may operate on both sides of the gaze, as both the viewer and tool of perception, yet also as the eye's attraction to look in. It may reveal what was before concealed, but at the same time entrap the occupant of its light within that space. Hopkins's questions regarding who occupies the lantern's light go unanswered; all that he sees of the individual is his 'wading light', thus suggesting the candle's insufficiency. The relationship between the Gaze and the candle is flexible, as it is founded on power, and how control is secured or threatened through vision.

Zizek speaks of Lacan's Gaze as 'denoting at the same time power, (it enables us to exact control over the situation, to occupy the position of the master) and impotence (as bearers of a gaze, we are reduced to the role of passive witnesses to the adversary's action)'.[161] Zizek captures a basic principle of Michel Foucault's thinking as he suggests the passivity and compliance enforced by voyeuristic surveillance. Foucault summarised his theories in an interview entitled 'The Eye of Power':

> A fear haunted the latter half of the eighteenth century: the fear of darkened spaces, of the pall of gloom which prevents the full visibility of things, men and truths… A form of power whose main instance is that of opinion will refuse to tolerate areas of darkness. If Bentham's project [the Panopticon] aroused interest, this was because it provided a formula applicable to many domains, the formula of "power through transparency", subjection by "illumination."[162]

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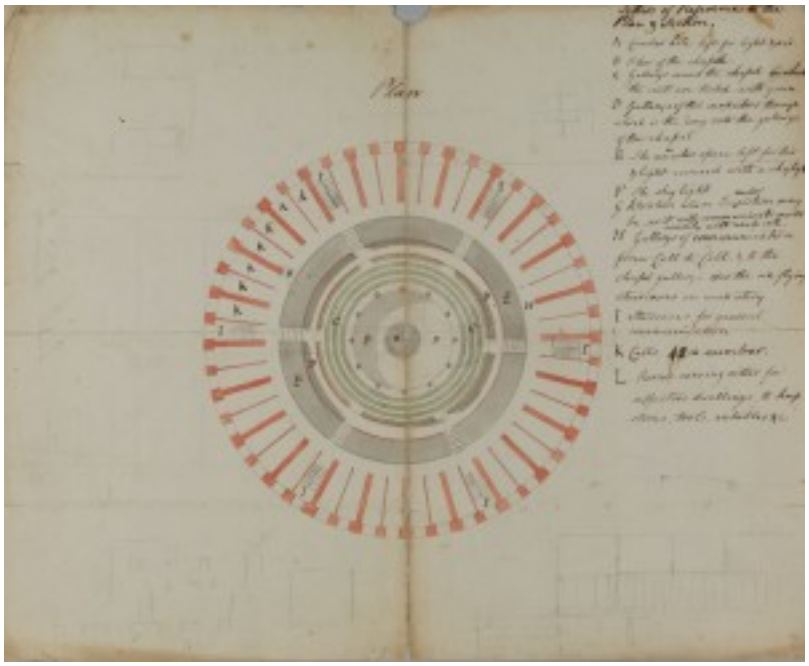
[159] Gerard Manley Hopkins, 'The Candle Indoors' in *The Cambridge Book of English Verse 1900-1939* p. 7, ll. 1-4.
[160] Gerard Manley Hopkins, 'The Lantern out of Doors' in *The Cambridge Book of English Verse 1900-1939* ed. Allen Freer and John Andrew (Cambridge: Cambridge University Press, 1970) p. 6, ll. 1-4.
[161] Slavoj Zizek, *Looking Awry,* p. 72.
[162] Michel Foucault, 'The Eye of Power' in *Power/Knowledge: Selected Interviews and Other Writings,* ed. Colin Gordon (New York: Pantheon, 1980) pp. 153-154.

Candlelight itself may be seen as a model of the discipline proposed by Foucault, even sharing many attributes with his ideal model of surveillance, Bentham's Panopticon.



Willey Reveley 'Jeremy Bentham's Panopticon Illustration', 1791.

The role of the perimeter wall of Jeremy Bentham's prison, the limits of visibility, can be likened to the outer rim of the candle's very isolated ring of light, while the flame and wick of the candle replaces the governmental eye, illuminating the human occupants of the field of vision and creating a circular well of perception. However, the candle, while embodying many of the processes at work in the figure of the panopticon, disrupts the traditional notion of panoptic authoritarian power due to its ambiguous status within the Gaze relationship and its liminal boundaries. Instead it shows that *subjection* through illumination can operate on a much smaller scale; as a kind of polyopticon. The candle can entrap in a similar sense to Bentham's prison; within the light, one can be observed from the darkness. Charles Dickens draws this analogy in *Great Expectations.* A grown-up Pip, lying in bed after hiding himself following Wemmick's warning not to go home, is placed under the surveillance of a rushlight:

> When I had got into bed, and lay there footsore, weary and wretched, I found that I could no more close my own eyes than I could close the eyes of this

> foolish Argus. And thus, in the gloom and death of the night, we stared at one another.[163]

The rushlight upsets the balance of the Gaze, causing Pip to feel anxiety as his candle, a tool of perception, stares back at him.[164] The candle has the capability to both permit and invite vision; it can illuminate, yet the subject (bearer) is constricted and made visible within the circumference of its light.

The candle attracts the gaze, making both itself and the occupant of its light the focus of unknown vision from the dark. As Lacan himself writes in *Four Fundamental Concepts of Psychoanalysis:* 'When the world begins to provoke the gaze, the feeling of strangeness begins.'[165] The flame of a candle provokes vision, both inside the interior of its illuminated space, and from beyond in the darkness. The candle may similarly be read as drawing attention to converse attitudes of both safety and threat through this provocation.

The Candle and the Literary Detective

As Schivelbusch suggests, the candle holds an intimate relationship with human psychology and behaviour; fire contains resonances of early human life, and the isolation of the flame into the candle has certain spatial and autonomous consequences. If a candle is lit, then its light signifies human presence. Ekirch suggests that candlelight was used in the nineteenth century as a way to ward off thieves: 'Besides denying anonymity to burglars […] artificial lighting signified human activity.'[166] Along with the signification of human presence, the candle's materiality also contains much more information and meaning than other light sources. The highly visible processes of candlelight, the wax melting, and the wick burning down, were unique in comparison to other nineteenth-century illumination.

In *No Name,* Wilkie Collins writes that 'Nothing in this world is left hidden forever […] Fire leaves the confession, in ashes, of the substance that consumed it' (p. 25). Within the candle we can see an even more focused confession. The candle's

[163] Charles Dickens, *Great Expectations,* p. 366.
[164] In Greek Mythology, Argus Panoptes (note the etymological roots of the word 'Panopticon'), was a 100-eyed giant; a watcher who garnered all of his power through ultimate vision. In her notes to the Penguin Classics edition of *Great Expectations,* Charlotte Mitchell draws a direct parallel between Dickens's depiction of Pip's subjection and Bentham's Panopticon (p. 504).
[165] Jacques Lacan, *The Four Fundamental Concepts of Psychoanalysis,* p. 72
[166] A. Roger Ekirch, *At Day's Close: Night in Times Past,* p. 101.

physicality may betray long after its light has gone out. Information may be read within its changing state as an object, a trait that emphasizes the uniqueness of the light source in comparison to the detachment of light from fuel source as in gas or electric lights. The candle can ensnare long after it has been extinguished. Detective fiction depends largely upon binary opposites. A crime must be pushed towards areas of the unknown, before the resolution forces the mystery back towards the known. The candle functions in the space between these oppositions; as it blurs the binary boundaries between light and dark, it suggests a symbolic reconfiguration of these oppositional concepts as it emphasizes both light and shadow.

Arthur Conan Doyle's Sherlock Holmes *reads* the candle stump in 'A Study in Scarlet' (1887). Holmes uses the position of the candle, and the indication that it had been recently burnt to a stump, to geometrically recreate the crime scene in his mind. In exposing the truth behind the word RACHE written on the wall, Holmes berates Gregson as he says to him: 'Why was that corner chosen to write it on? I will tell you. See that candle on the mantelpiece. It was lit at the time, and if it was lit this corner would be the brightest instead of the darkest portion of the wall.'[167] Holmes mentally recreates the light at the scene of the crime, applying his own illumination to a corner that the police had overlooked. The candle betrays the criminal's activity; Holmes *reads* the candle's position and materiality to determine how and when the graffiti on the wall came to be. Holmes operates in isolation from Scotland Yard in this case, in a similar way to how candlelight holds its own agency in networks of gas. He brings his individual agency and light to the case, as he finds a new way of illuminating a mystery that the networked police force had not noticed. Indeed, the chapter that contains the resolution of the case is entitled 'Light in the Darkness'.[168]

These ideas reoccur in *The Hound of the Baskervilles* (1902). Holmes is faced with a mystery that takes him out of the comfort of his own urban network, a network that he is both immersed in yet independent of. The thoroughly modern American, Sir Henry Baskerville, arriving at the seat of his ancestors in a horse and carriage, speculates that the curse of the Baskervilles may be caused by the gloom and darkness of the approach to the hall:

> "It's no wonder my uncle felt as if trouble were coming on him in such a place as this […] It's enough to scare any man. I'll have a row of electric lamps up

[167] Sir Arthur Conan Doyle, 'A Study in Scarlet' in *Sherlock Holmes: The Complete Stories* (Hertfordshire: Wordsworth, 2006) p. 31.
[168] Sir Arthur Conan Doyle, 'A Study in Scarlet', p. 48.

> here inside six months, and you won't know it again, with a thousand-candlepower Swan and Edison right here in front of the hall door."[169]

Complete visibility ensures that the area may be policed and observed, and any supernatural horrors or criminal behaviour threatening the occupants of the Hall may be deterred through visual exposure. However, this would negate the need for the detective; the balance between known and unknown would be skewed further towards absolute knowledge through complete visibility. To function as a reaffirming icon of rationality, the detective must be integrated within, yet independent of, a network of crime and the unknown. The candle provides light without the need to be regulated or networked, much as the detective still operates autonomously within institutionalised or governmental systems. As Rosemary Jann suggests: 'Holmes can reinforce the power of social ordering all the more effectively for being positioned above the crude machinations and self-interest of official power in his society.'[170]

As the mystery of Baskerville Hall begins to unravel, Watson and Holmes find the criminal Selden where he had been signaling to the house. There they discover an ensconced candle:

> A guttering candle was stuck in a crevice of the rocks, which flanked it on each side so as to keep the wind from it and also to prevent it from being visible, save in the direction of Baskerville Hall. A boulder of granite concealed our approach, and crouching behind it we gazed over it at the signal light. It was strange to see this single candle burning there in the middle of the moor, with no sign of life near it – just the one straight yellow flame and the gleam of rock on each side of it.[171]

The image of the candle isolated from any human presence in this scene is oddly uncanny; it undermines the perceived mutual dependence of the two and indicates the possibility that the criminal is not far away from the area. Watson remarks that it was 'strange' to see it with 'no sign of life' anywhere nearby, yet the fact that the candle is lit in such an isolated area becomes part of the two detectives' deductive reasoning. The candle gleaming tall on the face of the rock, visible only to a chosen area, is also visually resonant of the image of Holmes as the Man on the Tor, observing and gazing from a visually advantageous position.

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[169] Sir Arthur Conan Doyle, *The Hound of the Baskervilles* in *Sherlock Holmes: The Complete Stories* (Hertfordshire: Wordsworth, 2006) p. 219.
[170] Rosemary Jann, 'Sherlock Holmes Codes the Social Body' in *ELH,* Vol. 57, No. 3 (The John Hopkins University Press, 1990) p. 703.
[171] Sir Arthur Conan Doyle, *The Hound of the Baskervilles*, p. 249.

The candle in this instance, hidden on the moors, is what reveals the criminal to Holmes and Watson. They see his face, thrust into the light of the candle, which captures him within the field of perception. Indeed, when Watson and Holmes finally catch up with him in his death, Holmes remarks that 'it was indeed the same face which had glared upon me in the light of the candle from over the rock – the face of Selden, the criminal' (p. 275). Even in death, the candle still captures the image of Selden, like an early photograph. It is important to notice that Holmes recognizes the criminal as the same person from 'in' the light of the candle, and not 'by' its light. It suggests that the candle holds its occupant within a knowable field; there is a sense of empowered policing through vision. There is a reversal of the Gaze principles, again focused on the role of the candle in the scene, as Selden transitions from being agent to object. Furthermore, it is in the light of his bedroom candle that Holmes proves to Watson the facial similarities between Stapleton and Henry Baskerville, and ultimately uncovers the motive for the crimes.[172] Holmes, like the candle, stands apart from regulated centralised networks. By lighting everything, the need for a detective, and any idea of suspense between known and unknown, is destroyed by absolute perception. Indeed, when Watson meets Stapleton for the first time, the botanist laments Holmes's current absence as he remarks: "What a pity! He might throw some light on that which is so dark to us."[173] Holmes is that which will cast illumination on darkened areas, and operate individually and untainted within regulated networks. There is a great element of truth to the light of the candle; it is pure light, and did not affect its surroundings as much as gas or electric did. The candle functions in detective fiction through its encapsulation of the frailty of the boundaries between known and unknown. The detective may both entrap the suspect within their own candle-like field of illumination, pronouncing the known over the unknown, and also use the candle's readable materiality as an aid to their inductive and deductive reasoning.

[172] Sir Arthur Conan Doyle, *The Hound of the Baskervilles,* pp. 281-282.
[173] Sir Arthur Conan Doyle, *The Hound of the Baskervilles,* p. 225.

The Candle and the Gothic Unknown

Candlelight's symbolism has a certain duality - at the heart of this dual nature are the opposing ideas of power and impotence, and the known and unknown. Edgar Allan Poe's short story 'The Pit and the Pendulum' (1842) utilises both aspects of the light within quick succession, as the narrator of his tale speaks of candles as 'white slender angels who would save me', then recognises them as symbols of the death of hope:

> The tall candles sank into nothingness; their flames went out utterly; the blackness of darkness supervened; all sensations appeared swallowed up in a mad rushing descent of the soul into Hades. Then silence, stillness and night were the universe.[174]

The hope symbolised by the candle's vertical, pure, light is undermined by the constant threat of extinguishment. The candle begins to reflect the life of the individual, burning steadily until at last it burns down to nothingness, or instead being snuffed out and extinguished by death.

Within fiction concerning detection and espionage, candlelight, as previously shown, may be employed as a positive force, used to secure the known and provide invaluable perception. Detective fiction amplifies the 'known' aspect of the candle. Independent visibility is paramount to the policing of an environment; resolution of detective work depends on the emphasis of known over unknown. However, similar to the uneasy balance of the gaze relationship, the candle may function symbolically in a seemingly contradictory way. Instead of emphasising what is known, the blurred edges of darkness are made the focus of Gothic ambiguity, as the candle is aligned more with the liminal boundaries of its light and the darkness beyond. Lacan's model of the Gaze is disturbed and reversed, as the candle, once the sole means of perception, is made object of the gaze relationship, and invites the unknown to peer in.

The candle, to use a phrase of Milton's, can make darkness visible. The boundary between light and darkness is softened by the limited aura of light around the candle, as opposed to the penetrative glare of a mirrored lantern or electric torch. It is the very fragile relationship between darkness and the candle that makes it such a valuable tool in creating the Gothic atmosphere. Edmund Burke suggests that

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[174] Edgar Allan Poe, 'The Pit and the Pendulum' in *The Portable Edgar Allan Poe,* ed. J. Gerald Kennedy (New York: Penguin, 2006) p. 43

darkness encourages uncanny feelings due to its relationship with the unknown, and that over time it gathered associations of the supernatural (of 'ghosts and goblins') that eventually usurped the actual reason for fear of darkness, the loss of control and perception:

> [I]n utter darkness it is impossible to know in what degree of safety we stand; we are ignorant of the objects that surround us […] wisdom can only act by guess; the boldest are staggered, and he who would pray for nothing else towards his defence, is forced to pray for light.[175]

Burke expels the supernatural myths surrounding darkness, and instead emphasises that the true reason it is so terrifying is the loss of control and power over our own actions. Such virtues as wisdom and boldness do not matter in darkness. It is impossible to perceive, and impossible to act safely in the knowledge that those actions will not cause harm. Burke suggests that the anxiety centred on the strange and supernatural occur due to the mind completing the gaps left by perception. A 2013 scientific study into the effect of light on creativity corroborated Burke's idea. Anna Steidle and Lioba Werth found that 'activating the concept of darkness triggers a creativity-enhancing processing style which in turn facilitates creative performance'.[176] In their test of 114 German undergraduates, they discovered that although dim light encouraged creativity, it also resulted in an increase of irrational and illogical thoughts. The candle, by blurring the boundaries between light and dark, recreates the space between known and unknown as entirely ambiguous, reflecting states of mind in places of darkness.

In his seminal paper on the Uncanny, Sigmund Freud questions Ernst Jensch's assertion, that the doll, or automaton, Olympia, is the main source of the Uncanny within E.T.A. Hoffmann's story 'The Sandman.' He instead suggests that 'the feeling of something uncanny is directly attached to the idea of being robbed of one's eyes'.[177] It is this threat that is omnipresent within the light of a candle. The softening of the boundary of light makes the darkness more visible and oppressive, and the threat of the unknown far greater. The fragility of the candle flame means that the

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[175] Edmund Burke, 'Locke's Opinion concerning Darkness Considered.' in *The Works of Edmund Burke* (Boston: Freeman and Bolles, 1839) p. 176

[176] A. Steidle & L. Werth, "Freedom from Constraints: Darkness and Dim Illumination Promote Creativity," Journal of Environmental Psychology (September 2013) p. 67-80 from http://www.sciencedirect.com/science/article/pii/S0272494413000261 [accessed on 8/2/14]

[177] Sigmund Freud, 'The Uncanny', 1919, in *Fantastic Literature: A Critical Reader* (Westport: Praeger, 2004) p. 83.

threat of being plunged into darkness is always present. Candlelight within the spaces of gothic literature becomes associated with similar ideas; it is an aid to the creation of claustrophobic atmospheres, and of the tension of terror and relief. It is also ultimately concerned with the potential power of vision; the candle pertaining to gothic elements of the unknown through its relationships with the Gaze and the fragility of its light.

Edgar Allan Poe's 'The Oval Portrait' (1842) is a useful example of these theories at work. His short story is concerned with the extent of vision's power, the light of the candle at the centre of his portrayal of the idea. The narrator of the story, seemingly wounded, takes shelter in an abandoned chalet. As he lies in bed, bathed in the light of the 'tongues of a tall candelabrum',[178] he discovers a book, criticizing and describing the vast array of paintings on the walls and floor of his room. Moving the candelabrum to gain a better view of the book, he produces an effect of light he deems 'altogether unanticipated':[179] 'the rays of the numerous candles (for there were many) now fell within a niche of the room which had hitherto been thrown into a deep shade by one of the bed-posts.'[180] Candlelight contains its subject within a controlled field of vision; as the narrator moves the light, he changes what is visible, yet also changes the shadow. The number of candles arranged on the candelabrum causes the shadows to flit and change, as the light shifts the balance between cognition and obscurity.

Poe refers to the artistic design of the portrait as an example of 'vignetting,'[181] a technique used in painting and photography which draws attention to the centre of the piece by having a bloom of light in the centre, softening the edges. This is a reflection of the light of the candle; candlelight, like the vignette, illuminates from the centre and softens the periphery of its light into a transient edge of darkness. The painting reverberates in the composition of environment, the subjects framed in the centre while surrounded by the unknown of the blurred boundaries. The candelabrum focuses the readers' gaze; it frames the man and the painting within their environment; the narrator 'remained, for an hour perhaps, half sitting, half reclining, with [his] vision riveted upon the portrait' (p. 150). As attention is focused, peripheral details become blurred. It is only when 'with deep and reverent awe' the narrator

[178] Edgar Allan Poe, 'The Oval Portrait' in *The Portable Edgar Allan Poe,* ed. J. Gerald Kennedy (New York: Penguin, 2006) p. 151.
[179] Edgar Allan Poe, 'The Oval Portrait', p. 151.
[180] Edgar Allan Poe, 'The Oval Portrait', p. 152.
[181] Edgar Allan Poe, 'The Oval Portrait', p. 150.

'replaced the candelabrum in its former position', that the vignette collapses due to the scene's lighting being rearranged. Indeed, it is this that often characterizes the candle's use within the gothic. It helps to focus the gaze, creating a sense of claustrophobia, while still maintaining the threat of the outside, or the other, thanks to its blurred boundaries. The protagonist of Poe's short story attempts to manipulate these borders, as he moves the candelabrum to where 'the cause of his deep agitation' may be 'shut from view' (p. 150). The possibility of being made object of the gaze relationship causes him a deep anxiety, and he attempts to distance himself from this by expelling the visual threat from his field of sight. The candle's variable presence within texts, standing for both the power of immediate vision and the threat of lurking darkness, is what makes it so resonant within gothic literary environments.

The Candle and Ambiguity of Mental States

The candle's transience as light source, and the liminal aspect of its illumination, means that it may be read as a metaphor and symbol for emerging psychiatric concepts of the nineteenth century. Its fragile and intricate relationship with darkness reflects the inability of nineteenth-century psychiatrists, such as John Connolly and James Cowle Pritchard, to 'determine clear boundaries between sensible and insensible'.[182] Henry Maudsley, in *The Physiology and Pathology of Mind* (1867) and Andrew Wynter, in *The Borderlands of Insanity* (1875) argued that madness was not solely hereditary, and most people had the capacity for insanity in certain circumstances.

The ambiguity of sanity and insanity is an idea explored in Henry James's *The Turn of the Screw* (1898). Much of the critical analysis on the novella is aimed at 'identifying the "fundamental truth" about the nature of James's tale and of the state of mind of his central character, the governess'.[183] However, Henry James himself insinuated that there is no distinct answer to the question, stating to Lady Gosford: '[A]s to understanding, it just gleams and glooms.'[184] Notably, the Governess of *The*

[182] Maria K. Bachmann, '"Furious Passions of the Celtic Race": Ireland, Madness and Wilkie Collins's *Blind Love'* in *Victorian Crime, Madness and Sensation* (Aldershot: Ashgate Publishing Limited, 2004) p. 181.
[183] Alexander E. Jones, 'Point of View in The Turn of the Screw', *PMLA, Vol. 74, No. 1* (March, 1959) p. 112.
[184] Henry James, 'Preface to the Turn of the Screw' in *The Ghostly Tales of Henry James* ed. Leon Edel (New Brunswick: Rutgers University Press, 1949) p. 43.

Turn of the Screw is subject to mental unease at times of vague light. Her first experience of a possible apparition is at a time of dusky twilight, as she sees Peter Quint at the top of Bly's tower. She suffers what James calls a 'bewilderment of vision', falling under the omniscient glare of a 'violent perception'.[185] Her moments of mental questionability occur at points where her vision is dulled, the transition between states emphasizing the ambiguity of both the apparitions and her sanity. To the Governess, 'the darkness had quite closed in' (p. 28). The bulk of the unknown, made clearer by the poor light, entraps her in an atmosphere of claustrophobia.

The candle is figured as a solution to dispel the dark obscurity, yet it instead intensifies the ambiguity between states of light and dark. In the moment of the 'apparition' on the stairs, the candle's frailty as a trustworthy light source is emphasised to create an atmosphere of intense foreboding. After the candle goes out with a 'bold flourish', it leaves her in the 'yielding dusk of earliest morning' (p. 59). Again, it is a transitional period that captures the Governess; she cannot clearly identify what she may perceive as real. The figure of Peter Quint in the stairwell seals her in the 'dead silence of our long gaze,' which held a 'note of the unnatural' (p. 59). She is held in a liminal state, her perceptions uncertain. The candle plunges her into the unknown; as it goes out, so too does what she may comfortably know and understand. The Gaze is reversed, and the Governess is made object of a scrutiny she cannot truly comprehend.

Henry James's brother, William, also used the candle as an example of how reality and understanding is constituted in *The Principles of Psychology.* Writing on the order of reality, and how we construct it, William uses candles in a similar - although admittedly more psychoanalytical way – to Henry's narrative:

> Suppose a new born mind, entirely blank and waiting for experience to begin. Suppose that it begins in the form of a visual impression (whether faint or vivid is immaterial) of a lighted candle against a dark background, and nothing else, so that while this image lasts it constitutes the entire universe known to the mind in question. Suppose, moreover, that the candle is only imaginary, and that no 'original' of it is recognised by us psychologists outside. Will this hallucinatory candle be believed in, will it have real existence for the mind?[186]

[185] Henry James, *The Turn of the Screw* (London: Penguin Books, 1994) p. 27. All Further references will be given in main body of text unless otherwise footnoted.
[186] William James, *The Principles of Psychology, Volume II.* (London: Macmillan and Co., 1890) pp. 287-288.

Here the candle is both an indicator and creator of reality. In this thought experiment, the light of the candle represents existence and assimilation of knowledge. The light of perception shines on the unformed mind of a newborn and creates the real. Both James brothers use the candle as a kind of substitute for the experience of reality and consciousness. What William James seems to be questioning is the absolute proof of a solid reality, and what we *create* as reality, in that the candle *may* be imaginary. Henry James presents a similar comment on how reality is constituted through the Governess's troubled perceptions, as the candle establishes an atmosphere of tension. The light enables the Governess to perceive, to know, while at the same time being fragile enough to suggest total eradication of perception, and obscurity of mind.

The presence of a candle does not serve to dispel darkness, but instead heightens the tension between light and dark. It is a symbol of reality, as William James suggests, yet its light emboldens the darkness and the unknown. In the Governess's experiences with the boy Miles, she uses the candle to try to encourage learning and understanding. She seems to think she may read Miles, and gain a better understanding of who he is, under the light of a candle. She says at one point 'Never, little Miles – no never – have you given me an inkling of what *may* have happened there. Therefore you can fancy how much I'm in the dark' (p. 88). She holds the candle over him, the 'glimmering taper' light enough to show how he looks at her from his pillow (pp. 87-88). But she is literally and metaphorically cast into darkness by the boy, who blows the candle out. The instantaneous fall from light to dark shocks the Governess; she is 'made conscious of darkness' (p. 91). The extinguishment acts as a catalyst to the deterioration of the Governess's mind - although as Andrew Wynter states, the mind is not a 'piece of cast iron, which snaps suddenly under the influence of a sudden frost-like emotion'.[187] Instead this is the culmination of a series of events that cause the Governess to question her perceptions and sanity; after this point the Governess describes herself as feeling a 'mortal coldness, as if I should never be warm again' (p. 102). She no longer trusts the illusion of protection the candle provides, the borderlands are no longer defined, and so she resides in a cold realm of completely unknowable liminality.

[187] Andrew Wynter, *The Borderlands of Insanity,* (New York: G.P. Putnam's Sons, 1875) pp. 1-2.

2.3 A Case Study in Wilkie Collins's use of Candlelight

In order to adequately convey the mutable presence of candlelight within nineteenth century literature, the following section will examine the concept within the works of Wilkie Collins. Lyn Pykett suggests the Sensation genre is 'seen by many commentators as a hybrid form, combining realism and romance, the exotic and the everyday, the gothic and the domestic',[188] thus making it a suitable fit for the variable use of candlelight. Collins's work combines all of the resonant associations of candle symbolism, as it embraces and combines detective fiction, the gothic uncanny, and questions of sanity and insanity.

Lyn Pykett argues Sensation fiction was 'the product of an age of rapid communication in which railways (and steam power in general), newspapers and the electric telegraph system changed the physical and social geography of Britain and transformed conceptions of time and space'.[189] Pykett acknowledges the role of technology in helping to shape Collins's work, yet her depiction of the new Britain ignores one of the most influential new technologies of the period – gaslight. Gas lighting changed the temporal space of Britain just as much as the railway did, and both allowed new cultures to flourish and new spaces to be inhabited. Jane Brox writes that 'Gaslight divided light – and life – from its singular, self-reliant past. All was now interconnected, contingent and intricate'.[190] Collins's fiction was largely written in the age of gas, and often comments on these industrial changes, as they create certain atmospheres within his works. Light is very important to his novels and short stories, especially the *contrast* of light that was created by the growing spectrum of nineteenth-century artificial illumination.

Collins imbues artificial light with theatrical influence; indeed, Simon Cooke refers to the 'staginess' that runs throughout the author's narratives.[191] In a letter of dedication in his second novel *Basil,* Collins writes of the intimate link between his novels and theatricality: 'the Novel and the Play are twin-sisters in the family of

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[188] Lyn Pykett, 'Collins and the Sensation Novel,' in *The Cambridge Companion to Wilkie Collins,* ed. Jenny Bourne Taylor (Cambridge: Cambridge University Press, 2006) p. 51.
[189] Lyn Pykett, 'Collins and the Sensation Novel,' in *The Cambridge Companion to Wilkie Collins,* pp. 52-53.
[190] Jane Brox, *Brilliant,* p. 68.
[191] Simon Cooke, 'Action and Attitude: Wilkie Collins and the Language of Melodramatic Gesture' in *The Wilkie Collins Society Journal* Vol. 1, 1998 from http://wilkiecollinssociety.org/action-and-attitude-wilkie-collins-and-the-language-of-melodramatic-gesture/ [accessed on 8/11/14]

Fiction; that the one is a drama narrated, as the other is a drama acted.'[192] Winifred Hughes argues that Sensation fiction strove to blur the boundaries between diametric concepts that were so integral to drama, and that this split characterized the genre:

> The melodramatic framework of certainty and moral absolutes was replaced by ambivalence and equivocation. In popular melodrama, the audience could count on the villain to be double-dyed in villainy and the heroine to be infallibly chaste or at least to die of her sin. They could count on poetic justice. In the sensation novel, these traditional verities were reconfigured or even contorted.[193]

The candlelit dichotomy blurs oppositional concepts such as heroism and villainy in a way reminiscent of the 'contortion' that Hughes describes. Collins blurs the infrastructures of such 'melodramatic frameworks' in order to create the mystery and ambiguity of his sensation fiction, something aided by the candle's reflection of this idea.

No Name, The Woman in White and *The Moonstone:* Vision and Detection

New cultures of display and spectacle caused vision to be thought of differently during the mid to late nineteenth century. The combination of the increase in public spaces and improved visibility due to gas lighting encouraged the idea of a modern, urban visual network. Magdalen Vanstone of *No Name* (1862) initially subscribes completely to this new culture of ultimate vision, before her experiences of the deception and disguise at play in the newly gas-lit society lead her to disassociate herself from such networks, and align herself more with the individual agency of the candle

Magdalen at first expresses her adoration for the gas-lit culture of the theatre:

> I want to go to another concert – or a play, if you like – or a ball, if you prefer it – or anything else in the way of amusement that puts me into a new dress and plunges me into a crowd of people, and illuminates me with plenty of light, and sets a tingle of excitement all over, from head to foot.[194]

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[192] Collins's Letter of Dedication to Charles James Ward, Esq. taken from Lyn Pykett, *Wilkie Collins: Authors in Context* (New York: Oxford University Press, 2005) p. 94.
[193] Winifred Hughes, 'The Sensation Novel' in *A Companion to the Victorian Novel* ed. Patrick Brantlinger and William B. Thesing (Massachusetts: Blackwell Publishing, 2002) p. 267.
[194] Wilkie Collins, *No Name* (Penguin Books: London, 2004) p. 7. Further extracts from this work will be given in the main body of text unless otherwise stated in the footnotes.

She begins the novel yearning for the grandeur and flamboyance of bourgeois cultures, yet eventually realizes and rejects the falsity of this life of costume and extravagance. Magdalen does not care what it is she experiences at first, whether it be a 'concert – or a play, if you like – or a ball', she instead craves the attention, possibility, and *illumination* that comes from being present in such cultural spaces. Eventually, however, she begins to value her father's view of this world, Mr. Vanstone describing it as 'Crash-bang, varied now and then by Bang-crash; all the women dressed within an inch of their lives; smothering heat, blazing gas, and no room for anybody' (p. 5). In Collins's works gas and electric light are symbols of a networked society that is uncannily and overwhelmingly visual. The lack of privacy and heightened visibility seem stifling and 'smothering'. Collins draws on the contrast between the new gas-lit society and the individual autonomy of candlelight to show the impact of this new society, thus heightening the sense of individuality present in the figure of the candle.

Losing her claim to her father's fortune, Magdalen allies herself with Captain Wragge, a distant relation to her mother and professional conman. Wragge, tellingly, operates in a space devoid of light, Collins describing him as 'a man well used to working in the dark' (p. 178). Wragge uses Magdalen as a source of light, a rejuvenating factor, and employs his schemes through her, encouraging her theatricality and alignment with the falsities of gaslight. The location of the novel shifts from York to London. York's light is poor in comparison to London, yet there is a certain romance to the illumination of the northern city that is not present in depictions of the capital's pleasure grounds. In Rosemary Lane, a place where 'very little light enters' (p. 148), Wragge witnesses 'one of the most striking scenes which England can show'; as 'the first few lamps were lit in the street below, [they] looked like faint little specks of yellow light' (p. 154). York's gaslight is far more subtle than London's blaze, which highlights unfavorable aspects of the capital. London is introduced through a detailed description of Vauxhall Gardens. Primarily lit by gas from the 1830s onwards, the Gardens encapsulated emerging cultures of display and visibility – they were a place to see and be seen, a space for both voyeur and flâneur. However, the Gardens also emphasised the artificial aestheticism of a society concerned with visibility and display.

In 1836, Wilkie Collins's good friend Charles Dickens wrote of a daytime visit to Vauxhall Gardens in *Sketches by Boz:*

> We paid our shilling at the gate, and then we saw for the first time, that the entrance, if there had been any magic about it at all, was now decidedly disenchanted, being, in fact, nothing more nor less than a combination of very roughly-painted boards and sawdust.[195]

There was a sense of unreal magic to the space gaslight created in its illumination; without its light everything appeared 'disenchanted.' The Gardens' popularity was not to last, as they fell derelict by 1840 after the owners went bankrupt. Collins alludes to them in *No Name* as an indicator of the reality hidden underneath the artificial sheen of flamboyant display, in a similar manner to how he initially associates Magdalen with the gaudy flare of gaslight:

> [O]n the site where thousands of lights once sparkled; where sweet sounds of music made night tuneful till morning dawned; where the beauty and fashion of London feasted and danced through the summer seasons of a century – spreads, at this day, an awful wilderness of mud and rubbish; the deserted dead body of Vauxhall Gardens mouldering in the open air (p. 211).

The extravagance of the early ages of gas has passed, and instead the Gardens' deserted husk suggests the reality hidden behind such aesthetic societies. Vauxhall was also one of the first sites of a major gasworks in the city, suggesting the spread of gas's poisonous influence throughout London, Collins describing it as 'One tributary stream in the great flood of gas which illuminates London' (p. 211). Gaslight is established as a light of deception and unreality. In the pages immediately following this description, as Magdalen, disguised as Miss Garth, meets Mrs Lecount, candlelight begins to be conversely established as a light of truth. Magdalen cannot gain any sense of agency by aligning herself with gas-lit society; she must always be part of a whole, as opposed to wholly individual.

Their meeting forms a very direct contrast to the establishing scenes of London in Vauxhall Gardens, as the text moves from a place of gaudy openness and marked display, to the closed domesticity of the home of Noel Vanstone. The light of the candle, and the close proximity of Mrs Lecount to her, force Magdalen to be evasive in her actions, and keep the light between her and the housekeeper in order to disrupt the balance of subject and object within the Gaze. When disguised, Magdalen soon realizes that 'the art which succeeded by gaslight failed by day: the difficulty of hiding the plainly artificial nature of the marks was insuperable' (p. 217). In an

[195] Charles Dickens, *Sketches by Boz* (Philadelphia: Lea and Blanchard, 1850) p. 75.

attempt to distance herself from the scrutiny and truth of candlelight, Magdalen exclaims to Vanstone and Lecount: 'I must beg your permission to wear my veil down and sit away from the light' (p. 224). Martin Banham details how the intense light of gaslight in comparison to oil-lamps and candles affected theatricality: 'Styles of acting, scenery, costumes and make-up that had seemed acceptable under murky candle and oil-lamp light now seemed overblown, vulgar and garish.'[196] Acting in the manner that gaslight dictated failed in the light of other forms of illumination. Magdalen had been conditioned to act in a certain way by her associations with gaslight, yet at this stage she begins to note that certain qualities failed by its light, thus emphasizing the symbolic agency and individuality of the candle.

Lecount's deductive reasoning is also symbolized through her relationship with the candle and light itself. As she ruminates on the figure of 'Miss Bygrave' (the woman who is to marry Noel Vanstone, who is in fact Magdalen in a different disguise) her ratiocination is triggered when 'as soon as the candle went out, the darkness seemed to communicate an inexplicable perversity to her thoughts' (p. 307). There is a link between candle and thought, as Lecount's mental process is catalysed by the instant absence of the candlelight. Collins describes the 'solitude' of her room, the candle isolating Lecount within an area of transient perception. The disappearance of the candle's light reminds her of 'the false Miss Garth in the chair by the side of it [the kitchen table], shading her inflamed eyes from the light' (pp. 307-308). The light of the candle captures Magdalen in a mental photograph not unlike the entrapment of Selden in the candlelight in *The Hound of the Baskervilles.* Lecount pulls together 'fragments' of thought, following Bachelard's model of the candle-dreamer, defined as a thought process that combines a curious 'melancholy' with 'actual memories'. [197]

As Lecount's thoughts shift towards realisation, the calm serenity of candlelight as symbol is replaced by the metaphoric instantaneousness of electric light:

> With electric suddenness, her mind pieced together its scattered multitude of thoughts, and put them before her plainly under one intelligible form. In the all mastering agitation of the movement, she clapped her hands together, and cried out suddenly in the darkness: "Miss Vanstone again!!!" (p. 308).

[196] Martin Banham, *The Cambridge Guide to Theatre* (Cambridge: Cambridge University Press, 2000) p. 1026.
[197] Gaston Bachelard, *The Flame of a Candle,* p. 26

Collins prefigures the twentieth-century image of the electric light bulb moment in the 'electric suddenness' that indicates instantaneous revelation, as opposed to the candle's paced reverie.[198] The candlelit environment enables her to dream, for her mind to dwell on her fragmented thoughts, before the instantaneous darkness triggers a reminder of Magdalen's evasiveness in the face of candlelight, and her distinct yearning to remain in the shadows.

As the story progresses, Magdalen's associations with light change; she begins to feel disaffected by her yearning for gaslight and exposure, and instead sees how she may gain a sense of agency through a close relationship with the candle and darkness. As she moves beyond the influences of Captain Wragge, she begins to gain her own autonomy, and initiates a plan in attempt to gain her wealth. Collins again uses light to document his characters' ratiocinations as Magdalen instigates her new plans. As Magdalen begins to drift off to sleep, she suddenly feels that 'The drowsy obscurity of the room struck her with terror,' and that she must reawaken, both figuratively and literally, in order to ensure 'No more darkness; no more repose!' (p. 395). The darkness is complete; she does not gaze into light from the dark, or from darkness into light. Soon after, she speaks with her housemaid Louisa, and shows a stoic determination to gain her inheritance back, saying 'You forget how strong I am. Nothing hurts me', Collins immediately adding 'She lit her candle, and went upstairs to her room' (p. 396). Magdalen adopts the determined flame of the candle as an emblem of her own courage. She lights her own candle, as opposed to having her servant Louisa do it, reinforcing her sense of renewed agency. This scene is reminiscent of a moment immediately before Magdalen's disguised encounter with Mrs. Lecount at Captain Wragge's house: 'The front room at the lodgings contained a sofa-bedstead, which the landlady arranged betimes for the night. This done, and the candles brought in, Magdalen was left alone to shape her future course, as her own thoughts counselled her' (p. 215). There is an association drawn between candle-lit solitude, and the focusing of thought into self-reflection, with the symbolic relationship of illuminating one's own self and taking control of life and independent agency. Bachelard suggests that individual inspiration may be found and conveyed through the light of a candle due to the verticality of its flame: 'What burns well burns

[198] All etymological accounts of this image point to early cartoons of the 1920s as the originators of it. The fact that most early animation was silent meant that animators had to think of a way to display thoughts or epiphanies in a visual way. The light-bulb, as well as being an invention within the lifetime of most animators, provided a perfect metaphor for illuminating one's own mind.

high. Consciousness and the flame have the same destiny in verticality.'[199] Magdalen no longer wants to be frozen under the glare of gaslight and its networked and artificial associations, but be able to exist independently and construct her own identity.

In her final attempt to reclaim her inheritance and legacy, Magdalen again drapes herself in the garments of theatricality as she infiltrates the home of Admiral Bartram disguised as her maid Louisa. Having embedded herself within the house, Magdalen gains a sense of agency not available to her during the day by conducting her espionage at night by candlelight. The darkness acts as protector, and the candle she carries reflects the enlightening nature of her detective actions. However, her determination is almost thwarted in a moment where the fragile boundaries that separate darkness and candlelight are heightened further. As she searches the house, Magdalen and the somnambulist Bartram are cast into the claustrophobic light of the same candle. There is a palpable tension as Bartram is positioned on the fringes of the illumination, cast in the spectral light:

> In the impulse of the moment, she stretched out her hand towards the hand in which he held the letter. The yellow candlelight fell full on him. The awful death-in-life of his face – the mystery of the sleeping body, moving in unconscious obedience to the dreaming mind – daunted her (p. 549).

The light ensnares them both within an aura of perception, while also playing on the liminal border of light created by the candle's illumination. The candle only secures safety for Magdalen in what she can see, but its boundaries are not physical, only illuminary. Bartram invades the space of Magdalen's detection, the candle's position creating the tension in this scene, as it adds solidity to Bartram's vague life-in-death state and underlines the juxtaposition between vision and blindness. The candle emphasizes the boundaries between states, amplifying feelings of the Uncanny, as its light is made constrictive and the darkness beyond more solid.

The light of the candle may support the processes of private detection and individual espionage, yet also encourage the notion of threats from outside the perceivable area due to the vague boundaries between its light and darkness. Bartram enters Magdalen's candlelit aura from the darkness, and disrupts her detective processes. The candle's light also betrays Magdalen in this scene, as her location is revealed to the wandering Mazey, Bartram's old navy comrade and human guard-dog.

[199] Gaston Bachelard, *The Flame of a Candle,* p. 19

Indeed, Mazey explicitly acknowledges the power that candlelight may have in capturing what is known and securing perception:

> She rose and tried to take the candle from the bureau, but old Mazey's cunning hand was too quick for her.
>
> "Let the candle be," said the veteran, winking in momentary forgetfulness of his responsible position. "You're a trifle quicker on your legs than I am, my dear – and you might leave me in the lurch, if I don't carry the light" (p. 553).

Mazey recognises that there is a difference between being master of one's own illumination and being caught within the limited field of light by someone or something gazing in. He enacts power over Magdalen by shifting the perspective of the subject/object dichotomy of the gaze and making the light of the candle itself, and Magdalen inside it, the *object* within the visual relationship.

The candle in *The Woman in White* (1859) conveys just as many mutable associations as in *No Name*. It is an indicator of serenity and calm, yet also of gothic tension, as well as a tool and symbol of espionage and detection. It is at first almost romantic, as Walter Hartright sits in its light and listens to Laura Fairlie play piano:

> We all sat silent in the places we had chosen – Mrs. Vesey still sleeping, Miss Fairlie still playing, Miss Halcombe still reading – till the light failed us. By this time the moon had stolen round to the terrace, and soft, mysterious rays of light were slanting already across the lower end of the room. The change from the twilight obscurity was so beautiful, that we banished the lamps, by common consent, when the servant brought them in; and kept the large room unlighted, except by the glimmer of the two candles at the piano.[200]

The transition of twilight 'obscurity' to the mysterious moonlight is 'beautiful' to Hartright, who, as an artist, constantly reminds the reader of light's importance. He describes his insufficiency in rendering Laura in a portrait similarly: 'The woman who first gives life, light, and form to our shadowy conceptions of beauty, fills a void in our spiritual nature that has remained unknown to us until she has appeared' (p. 52). Count Fosco later tells Frederick Fairlie:

> Light is the first essential. Light stimulates, nourishes, preserves. You can do no more without it, Mr. Fairlie, than if you were a flower […] Light, sir, is the grand decree of Providence. You accept Providence with your own restrictions. Accept light – on the same terms (p. 349).

[200] Wilkie Collins, *The Woman in White* (London: Penguin, 2003) p. 58. All further extracts from this work will be given in the main body of text unless otherwise stated in the footnotes.

There is an importance to natural light in this text, a kind of nourishing necessity, both in life and art, which further emphasises the role of artificial light when it is used. Collins esteems a type of light that seems to only be associated with the natural serenity of moonlight, and the 'glimmer' of candlelight, with the more artificial light of gas juxtaposed with the serenity of such lights.

Indeed, there is a juxtaposition exposed in Hartwright's first meeting with the Woman in White as she glances towards London and he notes that 'The sight of the gas-lamps and houses seemed to agitate her, and to make her impatient' (p. 29). Although an artificial light, candlelight seems to be the more honest and virtuous light, paired as it is with moonlight and calmness, whereas gaslight is a symbol of modern artifice, and the impatience and panic of the city. Gaslight in the city is similarly described in Charles Dickens's *Great Expectations,* as Pip describes coming into a 'sudden glare of gas':

> [I]t seemed, while it lasted, to be all alight and alive with that inexplicable feeling I had had before; and when we were out of it, I was as much dazed for a few moments as if I had been in Lightning.[201]

Gaslight causes agitation; it dazes its occupants and creates an incredibly artificial, dazzling environment in comparison to more serene source of light such as the candle, or the natural aspects of moonlight.

The candle also acts as an aid to detection in *The Woman in White.* In her attempts to spy on Sir Percival Glyde and Count Fosco, Marian leaves her candle burning, inadvertently providing her with an illuminatory alibi. Both Glyde and Fosco draw the conclusion that Marian is confined within both her room and the limits of the candlelight thanks to seeing the light burning at the window. It falsely indicates Marian's position, which she uses to her advantage as she eludes the male gaze, gaining power through situating herself in an invisible space. The light in this scene transforms the house into a stage set. Dramatic irony is created by the layered vision: Fosco and Glyde in the foreground, while Marian is positioned out of sight of them but in full sight of the reader. Collins's directions for this scene from the stage version of *The Woman in White* solidify this idea, and show how fluid his use of lighting is between the stage and the page:

> *The flat scene – which must not be placed further back than is absolutely necessary – represents a portion of the wall of* SIR PERCIVAL GLYDE'S

[201] Charles Dickens, *Great Expectations,* p. 269.

> *country-house; comprehending the ground-floor and the floor above it.* […] *The lighted drawing-room is seen through the window, and is entered by a door at the back, opening into the interior of the house. On the space under the verandah, outside the drawing-room, are placed one or two chairs and a small table.*[202]

The flatness of the scenery, and Collins's desire to have the scene as close to the front as possible, indicate that the stage was illuminated by the auditorium's gaslights. Other forms of artificial light are used within the set to provide depth and contrast: '*The time is night. A bright moonlight falls on the scene, and contrasts with the red light of the lamps in the drawing-room and study.*'[203] Collins was explicit about his dislike of gaslight in theatres, as providing a 'feeling of physical and emotional claustrophobia'.[204] His disdain for the light source led him to write an article in 1881 called 'The Air and the Audience', or 'The Use of Gas in Theatres' where he condemned the atmosphere gaslight created. In his foreword to a 1924 edition of Collins's article, John Balance describes the effects of gaslight that so bothered the author: 'Candles and oil had long been in use and were working so well: and actors had come to know these two makeshifts, had learned how to act with them; and now they were being taken away and a strange new stuff was being burnt.'[205] Gas lighting changed the way people acted both on stage and in the audience. In his article, Collins states: 'The truth is that we offer no encouragement to reform. Do the two or three theatres in London which have generously given us the pure electric light, empty the other theatres which economically insist on poisoning us with gas?'[206] To Collins, gaslight stifles and suffocates; within his texts we can see this dislike for gas lighting, and how candles and other sources are contrasted to such illumination through an emphasis of their portability, agency and cleanliness.

As Marian perches on the balustrade of the house, she is consumed by 'the black blinding darkness of the night' (p. 320). The darkness is only blinding to those who look into it; to Marian it is an ally in her pursuit of Fosco, Glyde, and the truth.

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[202] Wilkie Collins, *The Woman in White: A Drama* (London: Published by the Author, 1871) p. 33, from *http://jr.digitalpixels.org/wc/wiw/wiw.html* [accessed on 3/2/15]
[203] Wilkie Collins, *The Woman in White: A Drama* (London: Published by the Author, 1871) p. 34.
[204] Catherine Peters, *The King of Inventors: A Life of Wilkie Collins* (London: Secker and Warburg, 1991) p. 381.
[205] John Balance, foreword to Wilkie Collins, 'The Use of Gas in Theatres 1881' in *The Mask, Vol. 10, No. 4* (October, 1924) p. 163.
[206] Wilkie Collins, 'The Use of Gas in Theatres 1881' in *The Mask, Vol. 10, No. 4* (October, 1924) p. 166.

She looks upon them from the blackness, her candle insinuating her location as back in her own room, and gains a more active role thanks to her movement outside of the visually perceivable space. Within the dark, she is free to look, and indeed, thanks to another candle burning in a window, she discerns that 'The Countess was not yet in bed' (p. 320). She is not policed by light while on the balustrade. Like Sherlock Holmes, by detecting from the darkness she gains agency. This scene is another instance of the detective figure acting outside of the confines of a socially formed and regulated network. Marian assumes the position of the watcher in the darkness, a more powerful position than she could attain in daylight or mass illumination.

She takes on a similar role to the candle, acting independently in a socially-constructed field of vision much as the candle does in gas or electric light. Collins even describes her mental strength using candle imagery, as he states that her 'courage *flickered* up' (p. 333). The power she gains in this scene stems from the panoptic concept of backlighting to ensure visibility. Foucault argues that the panoptic principle reverses the idea of the dungeon, stating that 'full lighting and the eye of a supervisor capture better than darkness, which ultimately protected'.[207] Marian's actions position her within an invisible field, which protects her as she is allowed to gaze into the area inhabited by Glyde and the Count. She adheres to Foucault's notion that darkness can protect and visibility and light entrap as she watches the two men. However, of course, it does not replicate the Panopticon fully, as the men's actions are not repressed through being made aware of an observer, as the central guard tower does.

Candlelight in *The Woman in White* is something that is almost always individual, and holds an intimate connection with independent thought and agency. It creates a sense of focus in both the geometry of the scene and the intimate proximity of the characters in its light. The characteristics of its light are utilised in empowering the individual; it grants them a semblance of security and autonomy. Marian Halcombe both utilises and subverts this process. She, in effect, embodies both the the unknown that is beyond the reach of candlelight, and the candle's perceptive aura; a personification of both the obscurity that may lurk beyond the candle's light, and an example of the duality of a candle's nature to at once secure perception yet invite the

[207] Michel Foucault, *Discipline and Punish,* p. 200.

gaze inward. She understands the use of light in the domestic space, and similarly to Magdalen, uses it to develop her agency in a male-dominated literary space.

Light is also an important, and often recurring, motif within *The Moonstone.* The novel bases much of its narrative on the ambiguity and tension between concealment and revelation. The resolution of the mystery is almost always referred to in reference to light breaking upon darkness. Franklin Blake calls the story 'a slow and toilsome journey from the darkness to the light',[208] a phrase he later repeats as he states, determined to uncover the truth: 'the next morning should find me bent on a new effort at forcing my way, through all obstacles, from darkness to the light' (p. 355). The whole notion of darkness transitioning into light connotes mental enlightenment, obscurity giving way to understanding.

The candle's presence within this text yet again suggests the epistemological materiality of it as an object and light source. While investigating Cobb's Hole, Betteredge rebuffs Franklin's desire to go back by saying: 'They're great savers of candles along our coast; and they go to bed early at Cobb's Hole' (p. 299). The candle contains important information within its physical form. Betteredge divines a socio-economic divide from the place's use of candles, and creates an assumption that they still follow medieval practices by retiring to bed early, thus respecting darkness in their lack of artificial light. When Franklin persuades Betteredge to stay in the area overnight, we see a similar representation of the candle:

> I remember a hearty welcome (at Hotherstone's Farm); a prodigious supper, which would have fed a whole village in the East; a delightfully clean bedroom, with nothing in it to regret but that detestable product of the folly of our forefathers – a feather-bed; a restless night, with much kindling of matches, and many lightings of one little candle; and an immense sensation of relief when the sun rose, and there was a prospect of getting up (pp. 299-300).

This candle's light is weak; it is only one small candle to hold the darkness at bay, which must be constantly tended to to ensure its light. Symbolically, this represents the struggle to shed any sense of individual light on the mystery of the diamond at this point. However, as the case moves on, candlelight becomes an important factor in deciphering the truth.

The final resolution of the mystery, and the recreation of Franklin Blake's laudanum-induced somnambulism, rests on a direct reconstruction of the candlelight

[208] Wilkie Collins, *The Moonstone* (Oxford: Oxford University Press, 2008) p. 329. All further extracts from this work will be given in the main body of text unless otherwise stated in the footnotes.

on the night of the theft. In recreating the scene for Blake's performance, Bruff, Betteredge and Ezra Jennings discover that he usually slept with a light in the room. Jennings 'placed one of the two lighted candles on a little table at the head of the bed, where the glare of the light would not strike on his eyes' (p. 418). When Blake wakes up suddenly, the three men are forced to quickly blow out their candle and retreat to the darkest corner of the room. Like Marian Halcombe, they become observers in the dark, as Blake takes up his candle and rises from bed in his sleepwalking state. In taking up the candle, he is reversing the principles of the gaze, allowing the detective figures to watch and study him in a constricted atmosphere of light.

Blake's actions with the candle are reminiscent of Admiral Bartram's movement and relationship with light and dark in *No Name.* As he moves between the two states, the candle indicates the inconsistency in the recreation of the crime to his gathered audience:

> His first action, when he had moved once more, proved to be an action which he had *not* performed, when he was under the influence of opium for the first time. He put the candle down on a table, and wandered on a little towards the farther end of the room. There was a sofa here. He leaned heavily on the back of it, with his left hand – then roused himself, and returned to the middle of the room. I could now see his eyes. They were getting dull and heavy; the glitter in them was fast dying out (p. 422).

By putting the candle on the table, and moving out of its light, Blake seemingly breaks the trance he has been put into, and when he moves back into the light, Jennings reads his eyes and knows the experiment has failed. This scene acts as a synecdoche for the struggle of finding the truth behind the diamond theft. In this instance, the candle's light symbolizes the constant struggle for illumination to break the darkness of the central mystery of the novel. For every step towards the light, there is a further step back into darkness.

It is the candle's pivotal role in the gaze relationship that makes its light particularly useful to detection and the uncanny in these three texts. Judith Johnston notes: 'Perception is a key concept in considering detection. Detection embraces the practices of discovering, uncovering, noticing, investigating. All of these practices require perception.'[209] Detection and deception are both based primarily on the boundaries of what is perceivable and not perceivable. The fine balance of what may

[209] Judith Johnston, 'Sensate Detection in Wilkie Collins's *The Law and the Lady,'* in *The Australasian Journal of Victorian Studies, Vol. 14, No. 2,* p. 38.

be perceived by candlelight and what may lurk outside its confines is employed to create the tension between these two states. The candle acts as a metaphor for the physical position of the detective; the independent figure moving reassuringly and independently through networked and invigilated structures.

Collins's Gothic Short Stories: The Limits of Visibility

The candle may help to secure the unknown as known, yet when used in Gothic texts it portrays what lies beyond the borders of perception and in the realms of the other. Collins's short ghost stories offer a great number of examples of the uncanny potential of candlelight. In 'The Dead Hand' (1857), Arthur Holliday finds himself sharing a bedroom with a dead man. In a similar fashion to Poe's 'The Oval Portrait', light frames Holliday from the very beginning of the text. He wanders into the suburbs of Doncaster in an attempt to find somewhere to stay and finds that the 'suburban part of the town towards which he had now strayed was hardly lighted at all', and as he continues, 'down the winding road before him shone the dull gleam of an oil lamp, the one faint lonely light that struggled ineffectively with the foggy darkness all round him'.[210] Arthur struggles with blurred perceptions from the very start of the story; dim artificial light creates the liminal boundary between light and dark, and perceivable and imperceptible. The light from the wick-lamp isolates him further in spatial terms as he is framed by its glow. The limited aspect of the candlelight creates a spatial atmosphere that Anne Williams declares essential for Gothic fiction, that of 'claustrophobia, loneliness, a sense of antiquity and recognition that this is a place of secrets'.[211] Instead of the power one gains as bearer of a candle, as in detective fiction, Arthur is trapped by the oil-lamp's wick light. Schivelbusch suggests that people reacted to candles and oil-lamps in a very similar manner; psychologically, they felt the same connection as the wick still had to be trimmed, otherwise it would result in wildly different standards of light.[212] The wick-light marginalizes Arthur as he moves away from the main centre of life. He is drawn

[210] Wilkie Collins, 'The Dead Hand' in *The Haunted Hotel and Other Strange Tales* (Hertfordshire: Wordsworth, 2006) p. 41. All further extracts from this work will be given in the main body of text unless otherwise stated in the footnotes.
[211] Anne Williams, 'The House of Bluebeard: Gothic Engineering' in *Art of Darkness: Poetics of Gothic,* (Chicago: University of Chicago Press, 1995) p. 39.
[212] Wolfgang Schivelbusch, *Disenchanted Night,* p. 43.

towards this lamp; as in Hopkins's 'The Lantern out of Doors', the light attracts the onlooker, trapping them within a knowable field.

Light frames Arthur even more intensely in the room that he shares with the dead man in the bed. He is trapped within the candle's glare as he attempts to ignore the dead man by staying up and solving riddles and puzzles. Initially, he uses his candle as an aid to confirming the man's state as he moves it close to his mouth to see if the flame is shaken by his breathing: 'The flame still burned straight up as steadily as ever. There was a moment of silence, and the rain pattered drearily through it against the panes of the window' (p. 45). The life of the flame contrasts to the pale deathliness of the man. The physicality of the candle, as Bachelard notes, makes it an excellent metaphor for the transience of life and the proximity of death:

> The flame is precarious and courageous. This light is destroyed by a breath, relit with a spark, easy birth and easy death. Life and death are well juxtaposed here. In this image of them, life and death are well-conceived contraries.[213]

The candle is anthropomorphized by Bachelard, who sees its slow and solemn burn to nothingness, and the fragility of its light, as a metaphor for the precarious divide between death and life: 'The Candle dies even more gently than the star of the sky. The wick bends; the wick blackens. The flame has swallowed its opium from the shadow that embraces it. And the flame dies a good death; it dies in its sleep.'[214] To Bachelard, the candle has a symbiotic relationship with the darkness that lurks at the periphery of its limited range of light; it reinforces light's connection with darkness more than it emphasises light itself.

Arthur's experiences with his own candle in the bedroom of the Two Robins serve to reassert the pressing dilemma of his own mortality, born from sharing a room with a (seemingly) dead man. Arthur's carelessness at his own life is conveyed as he is described as one of those 'reckless, rattlepated, openhearted, and open-mouthed young gentlemen who possess the gift of familiarity in its highest perfection, and who scramble carelessly along the journey of life' (p. 243). The candle comes to represent the necessity of Arthur taking steps to control this 'scramble' and act independently under his own agency.

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[213] Gaston Bachelard, *The Flame of a Candle,* p. 16.
[214] Gaston Bachelard, *The Flame of a Candle,* p. 17

Indeed, later in the tale, as it turns out that the man is not dead after all, Collins further blurs the dichotomous boundaries of known and unknown, with the candle at the symbolic centre of such an opposition. As Arthur attempts to distance himself from the dead man, he separates himself spatially via his light and mentally through his working of the puzzles and riddles. Collins's treatment of the candle here resonates with deeper meaning:

> Up to this time his mind had been too much occupied to think of the light. He had left the wick of the candle unsnuffed till it had risen higher than the flame, and had burned into an odd penthouse shape at the top, from which morsels of the charred cotton fell off from time to time in little flakes. He took up the snuffers and trimmed the wick. The light brightened directly, and the room became less dismal (pp. 250-251).

Arthur's mind had been too preoccupied to consider his light, or when taking into account Bachelard's allegorical candle, his life. As such, he begins to take action to *illuminate* his own existence, as suggested by the candle's associations with agency and individual will. However, the first time he attempts to take control of his own light, he accidentally overtrims the wick and plunges himself into darkness. The obviousness of mortality in his present situation imbues the light source with a deeper meaning, more metaphysical than simply the threat of the dark, as the obscurity comes to symbolise the unknown of death. Instantly after he trims the wick, the room brightens; life has responded to his action. The candle grants him clearer perception of life and circumstance, yet the brighter light also makes the darkness surrounding him more solid. The light acts as another frame, as Arthur is contained within the room by the omnipresent darkness, and enclosed within the field of light of the candle.

When Arthur notices that the candle does not have much time left to burn, he is faced with the decision to either carry on trimming the lamp, or call downstairs for a new one. He decides to avoid 'the unreasonable dread of encountering ridicule, and of exposing his courage to suspicion' (p. 252) by attempting to light his own candle once more. As he moves to trim the wick of the candle, he 'took up the snuffers – but paused suddenly on the very point of using them, and looked attentively at the candle – then back over his shoulder at the curtained bed – then again at the candle' (p. 252). His vacillation is indicative of the choice he is presented with. He must either decide his own fate, as symbolized by the agency of providing himself with light, or carry on

with his lackadaisical attitude towards life and meet a potentially similar fate to the man in the bed.

Arthur decides to trim the lamp, yet trims it too short, and ends up casting the room into complete darkness. However, he seems to have gained courage from his efforts, and manages to manoeuvre his way to his writing-case, where he finds matches to light the candle again. Almost immediately after he lights the room again, the dead man is revealed to have come back to life, his hand moving out of the curtained bed. It is as if Arthur is facing a kind of trial, as he is held up in comparison with another man who is uncannily similar to him; the two men symbolizing control and the loss of it. There is a doubling or doppelgänger effect at work, as the two men are portrayed in a way that suggests a contradictory sense of dissimilar familiarity, as if they are different sides of the same coin – indeed, Arthur eventually learns that the man is possibly his brother. When cast into darkness, Arthur experiences 'inexpressible dread' (p. 253), yet it seems to be this transition between light and dark that wakes the dead man, Mr. Lorn. Indeed, the Doctor, who 'dragged the man, literally, out of the jaws of death' did so by 'groping haphazard in the dark' (p. 254). By establishing light and dark as binary substitutes for life and death, there is a further emphasis on the transition between mortal states.

There is a similar theme of fragility between oppositional states present in Collins's 'The Haunted Hotel' (1879). Agnes Lockwood, sleeping in the room of the hotel where her former fiancé Lord Montbarry died, begins to witness strange apparitions. As she prepares for nighttime in the Venice hotel room, she remarks on how dark the atmosphere has grown; the canals beneath her room are nothing but a 'black void', 'the night was heavy and overcast: nothing could be distinctly seen'.[215] The narrator remarks that perhaps the shadowy gloom of the hotel has been encouraged by the breaking off of her engagement to Montbarry:

> She turned from the shadowy abyss of the dark water as if the mystery and the gloom of it had been answerable for the emotions which had taken her by surprise. Abruptly closing the window, she threw aside her shawl, and lit the candles on the mantelpiece, impelled by a sudden craving for light in the solitude of her room (p. 109).

[215] Wilkie Collins, 'The Haunted Hotel' in *The Haunted Hotel and Other Strange Tales* (Hertfordshire: Wordsworth, 2006) p. 109. All further extracts from this work will be given in the main body of text unless otherwise stated in the footnotes.

As she lights the candles, she suddenly feels revived: 'The cheering brightness round her, contrasting with the black gloom outside, restored her spirits. She felt herself enjoying the light like a child!' (p. 109). The light cheers and calms her, as she undergoes a kind of reverie before the candle flame. Yet, like many of the candles in Collins's fiction, the repose they provide is fleeting due to the transience of the candle's light.

She extinguishes the candles, with the exception of one which she moves to the bedside table, and lights her night-light. After she wakes from her first sleep, 'every faculty and perception in her passed the boundary line between insensibility and consciousness, so to speak, at a leap' (p. 111) – again, boundaries are emphasised, this time the transition between 'insensibility and consciousness'. She cannot find an 'assignable cause' for this sudden change in her, except what she deems 'one trivial event': 'the night-light had gone out; and the room, as a matter of course, was in total darkness' (p. 111). In another attempt to use light to assuage her anxieties, Agnes then lights the candle at her bedside. At first, 'the welcome light diffused over the room', until she turns to the other side of her bed and 'suddenly revealed under the flow of light from the candle, was the figure of a woman, reclining' (p. 112). She recognizes the woman as the ghostly image of the dead widow of Lord Montbarry, and as she reaches for the bell to contact the servants, she sees something altogether more terrifying, a disembodied head floating near the ceiling of the room. She tries to account for this vision, and assesses the solidity of the room and what she can perceive as real:

> No supernatural change had passed over the room, or was perceptible in it now. The dumbly-tortured figure in the chair; the broad window opposite the foot of the bed, with the black night beyond it; the candle burning on the table – these, and all other objects in the room, remained unaltered (p. 113).

She trusts the candle-light, it has already provided her with safety as it cast back the darkness of Venice and her room; however this is only an illusion of safety as the obscurity is merely held back, not defeated, by the candle's light. She is contained within the atmosphere of terror by the candlelight; it does not dispel danger, but instead focuses it: 'By the yellow candlelight she saw the head distinctly, hovering in mid-air above her. She looked at it steadfastly, spell-bound by the terror that held her' (p. 113). The candle, which was previously an aid to her perception and repose, now

contains her within its light, trapping both herself and the uncanny threat of the disembodied head in the same aura.

In 'Blow up with the Brig!' (1859) Collins suggests the link between candles and mortality in a much more explicit way. Published in Dickens's *Household Words* alongside other ghost stories from Dickens himself and Elizabeth Gaskell, it tells the tale of a British sailor on a delivery mission to South America. The captain of the ship is tricked into letting an Irish man and a native pilot board the ship under the pretense of guiding them to safe dock; however, the two men then lead a boarding party which results in all of the crew apart from the narrator being killed, the pilot then securing the narrator in the hold of the ship with nothing but gunpowder and a lit candle for company.

The candle is at once his only source of salvation and the thing that makes him aware of the end of his own life. It disturbs him enough to cause his utterance to the collected audience at the start of the tale:

> I have got an alarming confession to make. I am haunted by a Ghost. If you were to guess for a hundred years, you would never guess what my Ghost is. I shall make you laugh to begin with – and afterward I shall make your flesh creep. My Ghost is the ghost of a Bedroom Candlestick![216]

The candle, so often a feature of the gothic environment, is no longer a means of lighting the gothic space, but its light *is* the gothic space. Although there is no clear supernatural aspect to the story, the horror is clear, as claustrophobia and hallucination are used to create an atmosphere of terror. The transience of its light is emphasised, its inconsistent, trembling, open flame echoing the fear of the story's protagonist. As he is sealed in the brig of the ship, he remarks that the candle had 'been freshly lighted. If left to itself, it would burn for between six and seven hours' (p. 269). The candle makes the passage of time more obvious. It embodies it, as it adds an element of finality to time and life's movement. To our narrator, this finality is nothing but death:

> There I lay, gagged, bound, lashed to the floor, seeing my own life burning down with the candle by my side – there I lay, alone on the sea, doomed to be blown to atoms, and to see that doom drawing on, nearer and nearer with every fresh second of time (p. 269).

[216] Wilkie Collins, 'Blow Up with the Brig!' in *The Haunted Hotel and Other Strange Tales* (Hertfordshire: Wordsworth, 2006) p. 263. All further extracts from this work will be given in the main body of text unless otherwise stated in the footnotes.

The quality of the candle's light, and its limited aura, reinforce his feelings of isolation. Instead of being presented as an autonomous force for ultimate good – the triumph of known over unknown – the gothic candle emphasizes the pressing nature of the darkness at the fringes of perception; the man is framed within his own mortality by the liminality of the candle's light. This reversal may be analysed through an examination of Lacan's gaze mechanics. The geometry of the scene allows us, in Lacan's words, to 'glimpse how the subject who concerns us is caught, manipulated, captured, in the field of vision'.[217] There is a direct line here between Lacan's works and Foucault's continuation of his ideas. We can see the power of vision that Foucault deems so important. The narrator is captured within the field of vision; the candle is gazing at him, rather than allowing his sight. As he halts his attempts to blow the candle out (destroying his perception yet securing his life), he notes 'I gave in again, and lay quiet again, always with my eyes glaring at the candle, and the candle glaring at me' (p. 270). The candle stares at him in a reminder of the omnipresent possibility of extinguishment, in terms of both perception and life.

The narrator's mind descends into irrationality and madness when contained in such claustrophobic light. Collins emphasizes the growing uncanniness of the candlelight as the narrator began to 'feel it getting queer' (p. 270). The candle is described as burning until 'the snuff was growing taller and taller, and the length of tallow between the flame and the slow-match, which was the length of my life, was getting shorter and shorter' (p. 270). The wick of the candle - symbolically the life that has burned out - gains power over the narrator as it begins to replace the rest of the tallow. He attempts to pray, only to have the candle 'burn it up' inside him through the vision of its 'slow maddening flame' (p. 271). His prayers turn to his mother and sister, before they too are replaced by the figure of the candle. His 'eyes opened again, in spite of me, and the flame of the candle flew into them, flew all over me, and burned up the rest of my thoughts in an instant' (p. 271). There is nothing left to him but the candle. Maniacally laughing in the face of death, the narrator finds instead that 'the light of the candle leaped in through my eyes, and licked up all the laughter, and burned it out of me, and made me all empty and quiet once more' (p. 271). Collins calls upon flame-based verbs to display the all-consuming power of the candle. The narrator's fear consumes him as the flame consumes itself; it burns, leaps

[217] Jacques Lacan, *The Four Fundamental Concepts of Psychoanalysis,* p. 92.

and licks. The flame burns into his mind: 'I couldn't feel the sweat of my own death on my face – I could only look at the heavy, charred top of the wick' (p. 271). His thoughts of family are disturbed, as he sees his sister engulfed in a mist of flame, and his mother knitting 'with ten flaming points at the end of her fingers and thumbs, and slow-matches hanging in bundles all round her face instead of her own grey hair' (pp. 272-273). As in 'The Dead Hand', where Arthur Holliday's unsnuffed candle comes to represent the burning up of life, so too does the candle in this story. Collins makes such a link explicit as he describes the situation as 'Body and soul being kept together by an inch of tallow!' (p. 271). The tallow indicates potential and life, yet the burnt-up wick symbolises waste, and the encroachment of death. Yet again, the candle's value as an object that can be *read* is emphasised.

Ironically, however, the candle also retains its alternative associations of perception and guidance. It is the gleam of the candle through a gap in the boards of the brig that allows an American ship to discern the narrator's location and rescue him. In its use within the Gothic, emphasis is placed on what may lurk beyond the light of the candle, its transient boundaries of light only offering fragile perception and safety. Its materiality suggests the possibility of extinguishment, whether it is a natural progression or the threat of being snuffed out. It is still an attraction to the eye, as evidenced by its role in saving the man's life, yet the Gaze pivots around the candle, and makes him aware of his own existence and mortality in an Uncanny refiguring of the candle's properties.

The Dead Secret and the Boundaries of Light and Mind

The Dead Secret (1857), Collins's first novel produced for serial publication, contains many similarities to Henry James's *The Turn of the Screw*. Both novels feature a female character of questionable sanity; there are architectural similarities in Porthgenna Tower and the country house in Bly; and most interestingly for this study, a similar use of candles. Maria K. Bachmann points out that 'independent of Maudsley's suggestion of a borderland between the sane and insane, Wilkie Collins was already charting this liminal psychic geography in his fiction'.[218] The liminal geography Bachmann suggests is important to not only the replication of anxieties

[218] Maria K. Bachmann, '"Furious Passions of the Celtic Race": Ireland, Madness and Wilkie Collins's *Blind Love'* p. 179.

regarding states of mind, but also in how the candle functions in the creation of this novel's atmosphere. Collins was deeply familiar with ideas of insanity and psychiatry from his time with *Household Words;* Jenny Bourne Taylor stating that the magazine – which heavily featured Collins, and was often edited by him and Dickens – attempted to 'dispel old myths about madness, and replace them with enlightened humanitarianism'.[219] Laurence Talairach-Vielmas also suggests that citations and allusions to medical figures and textbooks appear over and over again throughout his novels, from John Elliotson and William Carpenter in *The Moonstone,* to David Ferrier in *Heart and Science.*[220] *The Dead Secret* creates a psychological case study of the maid Sarah Leeson, whose mental state often corroborates the work of Maudsley and Wynter, as emphasis is placed on the possibility of a psychological area of liminality between rationality and irrationality. Anthea Trodd points out that Collins, in his Preface to the 1861 edition*,* states that 'the interest of the novel does not lie in the secret but on how the secret preys on the mind of a nervous maidservant, "the influence of a heavy responsibility on a naturally timid woman"'.[221]

Sarah, a nurse engaged in the service of Mrs. Treverton, crumbles under the weight of the family secret and the anxiety caused by her mistress's threats to haunt her after death. In introducing her, Collins creates an association between her and the candle that reverberates through the events of the text. In the very first scene of the novel, Sarah Leeson attends her mistress's deathbed. Collins first suggests Sarah's potential for delirium through the candle she holds when summoned to her dying mistress's bedroom:

> She stood for an instant speechless, on that momentous morning of the twenty-third of August, before the servant who summoned her to her mistress's death-bed – the light of the candle flaring brightly over her large, startled, black eyes, and the luxuriant, unnatural, grey hair above them. She stood a moment silent – her hand trembling while she held the candlestick, so that the extinguisher lying loose in it rattled incessantly – then thanked the servant for calling her.[222]

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[219] Jenny Bourne Taylor, *In The Secret Theatre of Home: Wilkie Collins, Sensation Narrative and nineteenth-century Psychology* (London: Routledge, 1988) pp. 28-29.
[220] Laurence Talairach-Vielmas, *Wilkie Collins, Medicine and the Gothic* (Cardiff: University of Wales Press, 2009) p. 7
[221] Anthea Trodd, 'The Early Writing' in *The Cambridge Companion to Wilkie Collins,* ed. Jenny Bourne Taylor, (Cambridge: Cambridge University Press, 2006) p. 30.
[222] Wilkie Collins, *The Dead Secret* (Oxford: Oxford University Press, 2008) p. 12. All further extracts from this work will be given in the main body of text unless otherwise stated in the footnotes.

Collins foreshadows the mania that Sarah will succumb to through the close textual relationship between her and the candle. Together they 'flare', 'tremble' and 'rattle'. The spatially claustrophobic aspect of the candle contains Sarah within a sphere of anxiety. The environment is not enlivened by candlelight; instead it functions as a metaphor for Sarah's mind, as the gloom becomes more present than light itself due to the nature of the candle: 'The night-light burning by the bed-side, displayed rather than dispelled the darkness in the corners of the room' (p. 13). Just as in the growing darkness in Sarah's mind, only the objects 'of the largest and most solid kind were prominent enough to be tolerably visible in the dim light' (p. 13). Her mind is becoming filled with bleak gloom, with only the solidity of the obscure perceivable: she sees only the 'great, shapeless bulk [that] towered up heavily and gloomily into view' (p. 13). The candle's light does not dispel these ominous shapes, but emphasises them.

Jenny Bourne Taylor suggests that, during the nineteenth century, 'attempts to identify insanity's signs and the problematic borderlands meant that now it was the potential strangeness *within* the boundaries of domesticised subjectivity that became apparent rather than the familiarity that dwelt within madness itself'.[223] The term 'domesticised subjectivity' suggests a reversal in the perceived safety of the home; there was a shift in how both domesticity and subjectivity were portrayed in Collins's texts, as the strangeness now came from within these once reassuring concepts. Taylor further suggests the importance of boundaries in Collins's fiction, encouraging the notion that the candle can act allegorically for such spaces in between, given its light's effect on the divide between light and dark. The idea of simply separating people into clearly defined areas of sanity was displaced by the possibility of madness affecting anyone. Madness had become 'familiar'; it was easy to segregate the sane and insane, yet what was even more disturbing was the idea that potential insanity lay dormant in everyone. Henry Maudsley encapsulates these ideas in his assumption that 'there are a great many people, who without being insane exhibit peculiarities of thought, feeling and character'.[224] The light Collins creates in the early deathbed scene suggests his fascination with the idea of a liminal mental space, a state that can flex between rational and irrational.

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[223] Jenny Bourne Taylor, *In The Secret Theatre of Home: Wilkie Collins, Sensation Narrative and Nineteenth-Century Psychology* (London: Routledge, 1988) p. 70.
[224] Henry Maudsley, *Responsibility in Mental Disease* (New York: D. Appleton and Company, 1874) p. 40.

Laurence Talaraich-Vielmas calls on Maudsley's physiological explanation of hallucinations and illusions when describing the mind as a 'potentially deceptive magic lantern, which transforms reality and projects images magnified through perception'.[225] Talaraich-Vielmas's metaphor is also highly reminiscent of the effect the candle has on perception. Maudsley believed that the beginning of mania occurs in an individual when intensity of thought or feeling 'not only transfigur[es] real impressions into the shapes of his imagination, but project[s] the images of his mind into objective forms'.[226] As in the studies of Steidle and Werth detailed in the previous section (see p. 83), which suggested that in darkness the brain works more creatively to fill in perceptual blanks, Maudsley notes the mind's tendency to create a transformed reality based on insufficient visual stimulus. The dim light of the candle, while representing Sarah Leeson's troubled, inconsistent mind, also creates the atmosphere in which visual apparitions may appear most believable. Collins's fascination with the 'death-in-life' of somnambulism may also be attributed to this idea, as the sleepwalker exists in the void between reality and unreality; the depiction of Admiral Bartram's expression in *No Name,* the recreation of the crime in *The Moonstone,* and the contrasts between the two states drawn in 'The Dead Hand' all draw on the liminality of contrasting states of mind.

Sarah Leeson's mental illness begins following the death of her lover, yet there is a moment soon after the death of her mistress that reinforces Sarah's mental existence within the borderlands of oppositional states of mind. As Mrs. Treverton dies, the moment 'passed, and with the next, the shadow which goes before the presence of death, stole up, and shut out the light of life, in one quiet instant, from all the face' (p. 22). Life and light are combined as one, death and darkness shut them out. This moment not only extinguishes the light of Mrs. Treverton, but also the mind of Sarah Leeson. She is affected in a way that 'paralyses' her mind (p. 24). The image of Sarah and her mistress, contained in the field of the candle's light, resonates through the text, and when the scene is recreated, so too is Sarah's guilt, and the fears of her mistress haunting her. Her mental issues become clearest at times of poor visibility, in what can be read as reproductions of the initial deathbed scene. The lighting of these scenes is always disconcertingly vague, taking place within

[225] Laurence Talairach-Vielmas, *Wilkie Collins, Medicine and the Gothic,* p. 161.
[226] Henry Maudsley, *Natural Causes and Supernatural Seemings* (London: Kegan Paul, Trench & Co., 1887) p. 155.

candlelight, or at dusk or twilight. Towards the end of the novel a doctor describes her malady: 'She is suffering […] under a mental hallucination of a very extraordinary kind, which, so far as I have observed it, affects her, generally, towards the close of day, when the light gets obscure' (pp. 335-336). She suffers from claustrophobia of mind, as her anxieties begin to mirror the constrictive liminality of a space between darkness and light.

Within dim light, Sarah cannot visually perceive her surroundings, just as she cannot rationally perceive her own self. In the gloom, objects suggest themselves to her as being something else. In her first meeting with the Franklands, as Mrs. Jazeph, Sarah attempts to control her own light and mind. Through careful application of the candle's light, she tries to distance herself from a direct recreation of the deathbed scene and cause of her anxiety. Rosamond Frankland (Mrs Treverton's daughter) suggests lighting a candle to cancel out the encroaching darkness of night. However, Sarah replies: 'I think not ma'am, I can see quite well without' (p. 117), hastily avoiding any further questioning, and any chance of Rosamond recognising her. The candle's relationship with the two women in this scene encapsulates the associations with borderlands inherent within its light, but also portrays the mutability of the candle's relationship with the gaze. The candle comes to represent different things for the two different women. Rosamond requires them to construct a reality around her, and garner safety and perception in an unfamiliar place, whereas Sarah attempts to remove herself from reality and recognition by not lighting the candles, as it would only make her personal gloom more obvious:

> The twilight faded over the landscape, the room grew darker and darker; and still, though she was not sitting close to the table on which the candles and matches were placed, Mrs. Jazeph made no attempt to strike a light. Rosamond did not feel quite comfortable at the idea of lying awake in the darkness with nobody in the room but a person who was as yet a total stranger; and she resolved to have the candles lighted immediately (p. 119).

There is a visual echo in this scene, as Rosamond's demand for light echoes Mrs. Treverton's dying demand of "Light! – give me more light!" (p. 14). In that instance, Mrs. Treverton and Sarah were framed by the vignetting of the candle by the bedside, much as Rosamond and Sarah are in this case. Sarah's guilt and anxieties surrounding her mistress's death and the secret she holds are contained within this solid visual image of her past. As such, the call for candles by Rosamond rekindles the spark of remembrance and guilt in her. Sarah tries to avoid it as much as possible. Indeed,

when she finally does relent, she places the candle in an entirely different location in the room. After Sarah eventually lights a solitary candle on her third try, she moves it to where it has no beneficial quality at all, carrying it 'away from the table which Mrs. Frankland could see, to the dressing-table, which was hidden from her by the curtains at the foot of the bed' (p. 120). She tries to change the visual geometry of the space in order to distance herself from her own anxiety of recreating the scene of her mistress's death. Sarah yearns to be in control of her own mental state again. As she moves the candle, she gains a sense of agency over what may be perceivable; she is in charge of her own light and space once again.

Later, as Sarah visits her Uncle Joseph, she is on the verge of disclosing her secret to him, yet her attention is diverted by her desire for the individual light of the candle:

> I told you so much, I know. Did I tell you no more? Did I not say that my mistress made me take an Oath on the Bible? – Uncle! Are there candles in the room? Are there candles we can light without disturbing anybody, without calling anybody in here? (p. 154)

It is twilight yet again in this scene, the transitional stage between night and day, a further reproduction of the borderlands between oppositional states. Sarah's determined avoidance of recreating the time of her extreme anxiety accord with Andrew Wynter's suggestions in his paper 'Brain Enigmas.' He discusses the idea of the unconscious when talking about dreams and déjà vu, as he describes the feeling as 'the faint shadow of a dream has suddenly and for the first time come to our recollection in a form so unusual that it seems as though we had acted the part before in another world'.[227] Sarah suffers from this phenomenon as she begins to recall her past through the associations she makes between her anxiety and light. She watches as the 'darkness gathers in corners, and creeps along the walls' (p. 154). Shadows of the past surround her and make her uneasy. The transient environment of dusk makes both light and dark apparent to her; she exists in the liminal state between, in both light and mind. Darkness to her is the unknown, 'the dead […] come back to this world' (p. 254). Light provides her with the repose that she desires, yet candlelight only gives her a false sense of perceptual safety. The candle contains Sarah, as it does Henry James's Governess, within the borderlands; they can be sane or insane within

[227] Andrew Wynter, *The Borderlands of Insanity,* p. 252.

its light. Both uses of candlelight retain the ambiguity regarding whether the women are in fact seeing a ghostly apparition, or, a trick of the mind and senses.

There is a final echo of the initial deathbed moment as the novel's denouement mirrors its beginning. As Sarah lies dying in London, her relationship with candlelight changes. In her final moments Sarah accepts the darkness, and allows it to consume her after the acceptance of her secret – that she is in fact Rosamond's mother - by Rosamond. She can now relinquish the anxiety and guilt that drove her to mental exhaustion. Sarah exclaims to her daughter: 'No! No light now. Give the darkness time to gather down there in the corner of the room' (p. 349). The secret that bound her mind has been released, and her anxieties assuaged. The ghost of her mistress is gone, even in spite of the darkness that is now surrounding her. This acceptance breaks Sarah's residence within the liminal boundary state, and allows her to rescind her fears and anxieties in the certainty of death. Rosamond acknowledging Sarah as her mother appears to drive away the 'quiet twilight dimness at the lower end of the room' (p. 350). Sarah can finally move to a state of repose and guiltlessness.

The description of Sarah at the moment of death recalls the initial description of 'the candle flaring brightly over her large, startled, black eyes' (p. 12). As she accepts her death and the release of her secret, she 'sprang up on her knees in the bed. For one awful moment her eyes shone in the grey twilight with a radiant unearthly beauty' (p. 349). She welcomes the twilight into her eyes; the candle no longer holds her in a state of liminality. In death she finds peace, as another binary opposition is breached. Indeed, the chapter titles surrounding this point all speak of a transition from one position to another, without lingering in the twilight between; the title of the chapter in which Sarah dies is 'The Close of Day', while the final chapter of the book is 'The Dawn of a New Life.' A natural transition between night and dawn, without twilight intervening, speaks of acceptance and a sense of rebirth that flourishes from death.

Sarah suffers an inherent anxiety in the artificial light of a candle, as it does not suggest solid states of light or dark, instead highlighting the transitional space between. The candle's light makes darkness oppressive and weighty, and blurs the boundaries between what can be seen and what cannot be. The candle's effect on the mind may be understood in a similar way to Lacan's uncanny gaze:

> I can feel myself under the gaze of someone whose eyes I do not see, not even discern. All that is necessary is for something to signify to me that there may

> be others there. The window, if it gets a bit dark, and if I have reasons for thinking that there is someone behind it, is straight away a gaze.[228]

What Lacan describes here is the feeling of not being in complete control of your perceptions, and the threat of existing in an obscure reality between perceptible and imperceptible. To Sarah, the threat of her mistress's ghost, the spectre of the unknown, is the strangeness at the window that Lacan speaks of. Her doubts and anxieties pool into dark shapes in the recesses of rooms, as the candle both illuminates her surroundings and provides her with an illusion of safety, while empowering the ominous darkness outside its light.

The candle's associations pivot from within the centre of oppositional concepts. The materiality of the candle itself suggests an artificial light source that can be *read* in a way that others cannot. Unlike networked gas or electric light, the candle was entirely isolated – it had personality and held a relationship with its subjects in a way that other sources of artificial illumination could not; its tallow, wax, or fat could indicate time, and its light could betray human presence. Its light was painted as pure and truthful, unlike the artifice of gaslight. It was a bastion of the *known,* a power to enlighten. It held associations of agency, as the qualities of it as an independent light source were emphasised by the growth of networked artificial light. It was, on one side of its metaphoric potential, a symbol of ultimate truth and a tool of ideal perception.

However, the candle's efficacy of light meant that it could also stand for converse ideas. Due to the liminality of candlelight's boundaries of light, it became associated with not only the safety of its perceptual aura, but also its capacity to embolden the darkness and shadows beyond. The visual image of the candle's blurred boundaries between light and dark may be seen to highlight similarly liminal concepts, as shown through the particularly nineteenth-century concern of the borderlands of sanity and insanity. Again, this versatility of allegory arises due to the candle's qualities of light; it does not penetrate, but merely punctures a window in the darkness. The frayed edges of light make the relationship between light and dark more fluid, a tendency mirrored by its use in discussing the space between oppositional concepts of mind.

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[228] Jacques Lacan, *The Seminar, Book I: Freuds Papers on Technique,* ed. Jacques Alain-Miller, trans. John Forrester (Cambridge: Cambridge University Press, 1988) p. 215

Chapter 3 – Gaslight

Camille Pisarro, ‘The Boulevard Montmartre at Night’, 1897.

3.1 Gaslight in the Nineteenth Century

There is no other source of illumination as quintessentially nineteenth-century as gaslight. Its history was largely confined to the period, rather than spanning previous centuries like that of fire and candles, or continuing into the twenty-first like electric light. It generated its own social and cultural associations without the history that influenced perceptions of other artificial light during the nineteenth century. Gaslight was new, exciting, and modern, and even though the flame lights that came before undeniably influenced it, it grew to define the post-Industrial Revolution lightscape.

A. Roger Ekirch argues that prior to gas illuminating Europe's towns and cities, preindustrial night-time was a 'sanctuary from ordinary existence' offering men and women the chance to 'express inner impulses and realize repressed desires both in their waking hours and in their dreams, however innocent or sinister in nature'.[229] Night was clearly divided from day, a place where inhibitions could be released and morality became more oblique. Gaslight affected these tendencies, and influenced the way that people behaved at night, both publicly and privately: 'By blurring the boundaries between day and night, [artificial lighting] altered the pace and scope of people's lives […] More than ever, there was greater freedom of movement at night, temporally and spatially, in cities and towns.'[230] Gaslight brought with it the first large-scale infiltration of industrial and artificial light into public spaces, as cities and towns became laboratories for early experiments with the lighting.

Wolfgang Schivelbusch termed the early nineteenth century 'the playful phase in the history of gas'.[231] In 1802, William Murdoch exhibited the possibilities of public gaslight by illuminating the exterior of the Soho Foundry in Birmingham. Murdoch, an employee of Boulton and Watt – the builders of the first steam locomotive – initially experimented by lighting his home by gas, and after noting the potential, moved his experiments into more public spaces. After the success of the display in Birmingham, he was commissioned to convert the Phillips and Lee Cotton Mill in Manchester into the first fully gas-lit place of industry. It was an incredible success, especially financially, as M.E. Falkus reports:

> Total expenditure on the plant was in excess of £5000, the cost of gas was about £600, allowing for depreciation of the equipment and the sale of the

[229] A. Roger Ekirch, *At Day's Close: Night in Times Past,* p. xxvi.
[230] A. Roger Ekirch, *At Day's Close: Night in Times Past,* pp. 332-333.
[231] Wolfgang Schivelbusch, *Disenchanted Night,* p. 16.

> coke manufactured as a by-product. The equivalent light by tallow candles would have cost an estimated £2000 a year.[232]

Gaslight was seen to be more efficient and economical than its illuminatory forebears. It was cheaper and easier to maintain than thousands of individual candles or oil-lamps. Yet this does not mean gaslight's growth into the dominant artificial light of the nineteenth century was easy or straightforward, as there were many other factors to consider beside the cost.

On the continent, different gas-based lighting technologies developed in parallel to Murdoch's work. In 1799, Philippe Lebon invented the Thermolampe, which he exhibited in Paris in 1801. He rented a house in Paris, outfitted every room – and the garden – with gas lighting, and charged the public entry to his grotto. Although the display was generally well received, the French government refused an application to finance a full-scale lighting system as they saw his method as impractical and paying for a full-scale gas network unfinanceable. [233] However, his experiments managed to catch the eye of Napoleon I, who asked Lebon to prepare the lighting for his coronation in Paris in 1804. This success was short lived, as Lebon was stabbed and killed the night of the coronation. One intriguing theory about his death suggests that Napoleon himself ordered his assassination, after his collection of merkins was destroyed by a thermolampe installed by Lebon.[234]

After his death, Lebon's invention attracted the attention of German entrepreneur, Frederick Albert Winsor (anglicised from his birth name Friedrich Albrecht Winzler), who also took a keen interest in Murdoch's work. Schivelbusch suggests that 'we can see these developments [Lebon's thermolampe and William Murdoch's early gas systems] as two loose ends, waiting to be tied up to create modern gas lighting'.[235] It was Winsor who achieved this. Thanks to his Murdoch-influenced ideas of a networked supply of gas, and his work in translating Lebon's discoveries, he was granted a charter in 1812 to set up the first London Gas Works, which eventually became the Gas Light and Coke Company. However, Winsor suffered from not being an engineer or inventor himself; he had limited knowledge of the chemical processes and heavy demands of a regulated gas-network. His company

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[232] M.E. Falkus, 'The Early Development of the British Gas Industry: 1790-1815' in *Economic History Review, N.S. 35, No. 2* (May 1982) p. 223.
[233] Peter D. Smith, 'Bright Lights, Big City' from http://www.peterdsmith.com/bright-lights-big-city/ [accessed on 6/10/14]
[234] Elizabeth H. Oakes, *A-Z of STS Scientists* (New York: Facts On File Inc. 2002) p. 177.
[235] Wolfgang Schivelbusch, *Disenchanted Night,* p. 25.

was bought out by more experienced directors, and he returned to Paris to try to popularise gas there in 1816. His work served him largely as it did in England; his vision and ideas were popular, yet he did not have the technological or business acumen to make anything of it. Soon after an exhibition of public gaslight in the Passage des Panoramas, his company went bankrupt and he died, impoverished, in 1830.[236] London was the first metropolis to be largely supplied with and lit by gas. Upon its establishment, Winsor's company possessed a single gasometer with a capacity of 14,000 cubic feet. Yet, in 1822, there were already another four companies and forty-seven gasometers with a total volume of almost one million cubic feet. The colonisation of Britain by Gas was rapid; by the late 1820s most of the major towns and cities were lit by gas. Similarly, by 1830, many of the major public squares and streets of Paris were lit by gas, followed soon after by cities across Europe such as Berlin and St. Petersburg.[237]

Within gaslight's development, we may witness three main ideas emerging: the value of modern industry and technological development; the growth of the metropolitan public space; and the evolution of visual society and culture. From the late 1820s to the mid-century gas was the dominant provider of light and vision to the people of the ever-growing metropolises, and while other light sources were still employed and valued within these networks, gas helped to solidify an emerging social consciousness. In the countryside, gaslight did not have such a solid presence as it did in cities, Ekirch noting that 'for much of the nineteenth century, darkness found welcome sanctuary in the countryside […] there, the forces of modernization were temporarily checked or forced, at least, to adapt to rural ways'.[238] However, within cities, there was an expansion of visual awareness and culture that changed how people could be observed, and be observers themselves. City seeing, Richard L. Stein argues, 'always requires a quick and comprehensive transformation of people into Others, into forms that are simultaneously more recognizable and more anonymous than they would have been otherwise'.[239]

Alex Goody writes that technological advances of the nineteenth century provided an increase in 'the amount and quality of leisure time and amusement, which

[236] Wolfgang Schivelbusch, *Disenchanted Night,* p. 26.
[237] Wolfgang Schivelbusch, *Disenchanted Night,* p. 31.
[238] A. Roger Ekirch, *At Day's Close: Night in Times Past,* p. 336.
[239] Richard L. Stein, 'Street Figures: Victorian Urban Iconography' in *Victorian Literature and the Victorian Visual Imagination,* eds. Carol T. Christ & John O. Jordan (Berkley: University of California Press, 1995) p. 235.

fundamentally transformed the landscape and urban environments of the Western world'.[240] The growth of urban visual interaction and communication was aided by developments in gas lighting, which allowed for longer occupation of public spaces. Jane Brox suggests: 'Once the night had been the same for all; now light began to separate more fully country from city. Little by little, the city night began to influence the rhythms of its day,' exemplified by the shops and markets of Paris which stayed open after 'daylight began to fail'.[241] There were new opportunities for the middle-classes to pursue leisure and entertainment. Peter Bailey asserts that the gradually improving middle-class wage, which had been rising since the mid-century, led to 'increasing leisure and the purchase or maintenance of commodities and services to enliven its passing'.[242] There was a distinct element of the theatrical to these leisure-seekers, as they were influenced both in their dress and behaviour by the theatre trips that they could afford to take. Indeed, Bailey also describes a typical London pub scene as having a 'theatrical aura […] amplified by the flaring quality of the new gas lighting'.[243] Gaslight tinged everything with an aura of the performative; it was an association that could not only be found in the theatre, but in gas-lit public spaces, shops and places of leisure. The city pushed further into night, and afforded the public a night-time autonomy that was a stark contrast to, for example, the lantern-led processions of night-time in country towns like *Cranford* earlier in the century.

Vision and Consumerism

Carol T. Christ and John Jordan explain that from the mid-century onwards, there were a number of 'devised rationales to legitimate spectatorship as a dominant cultural leisure-time activity'.[244] Lighting became more public, regardless of class and status, and gaslights opened up urban areas to the scrutiny of whoever occupied their light. By the mid century, sheet glass manufacture had been perfected, and in 1851, the window tax was repealed, as well as laws and taxes levied on the production of

[240] Alex Goody, *Technology, Literature and Culture* (Cambridge: Polity Press, 2011) p. 4.
[241] Jane Brox, *Brilliant,* p. 35.
[242] Peter Bailey, *Popular Culture and Performance in the Victorian City* (Cambridge: Cambridge University Press, 2003) p. 26.
[243] Peter Bailey, *Popular Culture and Performance in the Victorian City,* p. 154.
[244] Carol T. Christ and John O. Jordan, 'Introduction' to *Victorian Literature and the Victorian Visual Imagination,* eds. Carol T. Christ and John O. Jordan (Berkeley: University of California Press, 1995) p. xxvi

homemade candles. These improvements in visual technology helped to legitimise spectatorship as an urban pursuit; the night became a phantasmagorical realm, a third order of space and time within which an alternate reality could be played out. The expansion of vision saw its embodiment in the Crystal Palace of the Great Exhibition of 1851 - which was open to anyone who could afford the cost of a shilling -[245] and in the glass and gas-lit Arcades of Paris. These buildings, which blurred indoor and outdoor space, inspired another nineteenth-century development, encapsulating the power of networked vision, gaslight and consumerism: the department store. C.R. Fay notes the example of draper's apprentice William Whiteley, who, as one of the six million people to visit the Great Exhibition, came away feeling inspired by its spectacle. Fay suggests that Whiteley, as a man with an intimate interest in materials and textiles, would have been influenced to ask:

> Why should not London have great shops of this type, bright and open, through which, and outside which, customers might pass in parade? Gas-light and plate-glass were in abundant supply; and since there was then no restriction on shop assistants' hours of work, it would be possible to shop till midnight in well-lit streets with well-lit window fronts.[246]

Fay's account of Whiteley's reaction binds together the influences of the Crystal Palace, gaslight, and the potency of vision within the evolving culture of consumerism. Whiteley saw the leisure-classes as one mass, who might pass in 'parade', as part of a linked network of consumer desire. To him, the order of night and day was irrelevant in the newly gas-lit arenas of spectacle. People could shop or revel in the newly colonised evening, while the importance of both seeing and being seen further established spectatorship as an important urban activity. Whiteley created Whiteley's Department Store in Bayswater London in 1863, which went on to become the biggest store of its kind in London, employing a staff of 6000 by 1890, selling everything imaginable under its roof and making Whiteley a millionaire. Pamela Cox and Annabel Hobley's book *Shopgirls: The True Story of Life Behind the Counter* details some of Whiteley's employees, and emphasises the fact that 'late-night shopping, made possible by gas lighting, long hours and customer demand, was

[245] Liza Picard, 'The Great Exhibition' from http://www.bl.uk/learning/histcitizen/victorians/exhibition/greatexhibition.html [accessed on 8/6/15]
[246] C.R. Fay, *Palace of Industry, 1851: A Study of the Great Exhibition and its Fruits* (Cambridge: Cambridge University Press, 1950) p. 91.

a Victorian invention'.[247] Lynda Nead, writing on Whiteley's London, notes that 'Early Victorian London was a late-night place. West End shops were commonly open until at least 8.00 p.m. and City and suburban shops kept even later working hours'.[248] The longer opening hours and gas-lit frontages of department stores in big cities faced considerable opposition, so much so that 'The Early Closing Movement' was formed in 1842. A movement that garnered royal support from Queen Victoria and Prince Albert, it blamed gas for creating a 'new type of urban pedestrian and shopper; men and women of the middle classes who consumed the sights and goods of the gas-lit city'.[249] There was a snobbish fear of middle-class encroachment into the lives of the wealthier classes. The boom in middle-class wages around the mid-century allowed that segment of society to colonise a different temporal space, resulting in more pedestrians flooding the streets rather than the limited numbers of more 'respectable' people. Although the growing leisure class faced disapproval, the attraction of visibility and the opulence of the consumerist city in the evening meant that late opening prevailed. Nead suggests that 'early closing produces ocular deprivation, sealed panels and shutters as opposed to brilliant gas, glass and goods',[250] which was not at all preferable to the golden aura of consumerism that shone on cities and drove evolving economies.

Newly developing cultures of urban vision in the West became synonymous with the power of gaslight and its role in affecting different elements of consumerism. Gas lit the theatre stage where consumer culture was influenced. Lucile (real name Lucy, Lady Duff-Gordon), a prominent clothing designer of the late nineteenth-century, commented on the relationship between theatricality, women and consumerism: 'All women make pictures for themselves. They go to the theatre and see themselves as the heroine of the play.'[251] Lucile greatly influenced dressing shop windows and displays theatrically, and suggested that women could lose their real self in reflections and images of mannequins and actresses. Erika Diane Rappaport further discusses Lucile's techniques, and suggests that she, along with other retailers, recognised that 'theatrical environments triggered a psychological urge to purchase

[247] Pamela Cox and Annabel Hobley, *Shopgirls: The True Story of Life Behind the Counter* (London: Arrow Books, 2014) p. 41.
[248] Lynda Nead, *Victorian Babylon,* p. 85.
[249] Lynda Nead, *Victorian Babylon,* p. 86.
[250] Lynda Nead, *Victorian Babylon,* p. 86.
[251] Lucy, Lady Duff-Gordon, *Discretions and Indiscretions* (London: Jarrolds Limited, 1932) p. 76.

goods'.[252] The relationship between the two was reflexive, as the costumes and clothing of the stage encouraged demand for goods just as much as the fashions of the street influenced attire on stage.

In another reflection of spectacle, shop windows – portals of consumer culture – at first copied the lighting design of the stage. Charles Knight in *Shops and Shopping,* documents that gaslights of London shops were 'fixed outside the shop, with a reflector so placed as to throw a strong light upon the commodities of the window'.[253] Window displays were miniaturised stage productions, as shopkeepers strove to display their goods in such a way that would draw the patron's eye to the spectacle, and encourage them to spend money. The power of vision lay with the window dressers, not the public who were increasingly seduced by the consumerist matrix as they gazed upon and purchased the goods. The link between consumerism and gaslight is deepened when considering Karl Marx's definition of the commodity as 'in the first place, an object outside us, a thing that by its properties satisfies human wants of some sort or another'.[254] Within the terms of Marx's description, gaslight itself is commodified. It was something beyond the control of an individual, it had a price, and was inextricably tied to visual extravagance. Gaslight was detached from its fuel source: instead of witnessing the burning of wood, or the diminishing wick of a candle, people only perceived the light emanating from the braziers. It was a technology that created a disconnect between light and people, as it became an 'object outside us'. The power of perception, of both everyday life and consumerist goods, was *outside* of the people experiencing them. Retailers, set dressers, and shop window decorators created an image of reality that leisure classes and the moneyed middle class wanted to recreate.

The theatre and shop both conjured an atmosphere of the unreal; a sense of reality being arranged so as to be aesthetically appealing or attractive. Gas-lit life began to be acted out, not lived naturally - especially for women. Ariel Beaujot argues: 'In a world that could increasingly purchase the trappings of class, a woman's performance of gender moved away from what she did towards what she could buy.'[255] This was emphasised by gaslight's tendency to imbue everything under its

[252] Erika Diane Rappaport, *Shopping for Pleasure: Women in the Making of London's West End* (Princeton: Princeton University Press, 2001) p. 188.
[253] Charles Knight, *Shops and Shopping* quoted in Wolfgang Schivelbusch, *Disenchanted Night,* p. 148
[254] Karl Marx, *Capital* ed. Friedrich Engels, Vol. 1 (New York: Modern Library, 1906) p. 41.
[255] Ariel Beaujot, *Victorian Fashion Accessories* (London: Berg, 2012) p. 1.

light with a unique yellow hue. The Olympic Theatre and the Lyceum in London were some of the first buildings to be completely lit by gaslight, both inside and out, in 1815. Similarly in France, the Comédie-Française was one of the first completely gas-lit properties in Paris in 1832. In 1887 actress Ellen Terry wore a dress for a performance of *Macbeth* that was sewn all over with green beetlewings in order to shine in the light of the gas.[256] The effects of gaslight on the paraphernalia of the stage were similarly felt on the costumes and architecture of the street. Terence Rees writes that 'the colour-killing brightness opened the way for the introduction of fresher and gaudier colours which would thrive in gaslight'.[257] Improvements in the mass production of clothing, and increasing consumer demand meant that gaslight helped to dictate fashions, as people designed their attire to negate the effects of gas's yellow light. There was a sense of staged artificiality to gaslight, a facet emboldened by its close links to the superficiality of consumer culture and the false reality of the theatre.

The visual effect wrought by the yellowish impingement of its light, inflecting clothing and architecture with a sense of the artificial, and the networked nature of gas itself as both symbol and reality approaches Jean Baudrillard's theory of *hyperreality*. Baudrillard draws a line between the traditional sites of culture (museums, monuments, galleries, libraries) and the new sites of consumerist culture that emerged in the nineteenth century. He argues that this is where 'the hyperreality of culture begins,' a new type of reality that is no longer dictated by 'distinct exchanges or determined needs', but instead where 'cultural objects […] have no other end than to maintain you in a state of mass integration'.[258] It was not quite the level of hyperreality that Baudrillard examines in his study of Disneyland in the twentieth century, yet it is clear to see how the gas-lit city was a precursor to such artificial realities. Consumerism and capitalism focus on maintaining themselves through constant self-promotion and cultural assimilation. They create a disconnected reality where the value of things, people and places is developed through money. The gas-lit icons of consumer culture, the department store and the theatre, are intimately linked

[256] 'The Actor and the Maker: Ellen Terry and Alice Comyns-Carr from http://www.vam.ac.uk/content/articles/t/the-actor-and-the-maker-ellen-terry-and-alice-comyns-carr/ [accessed on 10/2/2016]
[257] Terence Rees, *Theatre Lighting in the Age of Gas* (London: The Society for Theatre Research, 1978) p. 189.
[258] Jean Baudrillard, *Simulacra and Simulation,* trans. Sheila Faria Glaser (Michigan: University of Michigan, 1994) p. 67.

to the creation of Baudrillard's image, as they further reinforce the idea of a time and space outside of the typical order of reality.

Baudrillard suggests that the nature of the hyperreal simulacra functions around the notion that the 'map precedes the territory',[259] an idea that is highly applicable to the gas-lit stages of nineteenth-century cities, as the mapped reality of night replaced tangible realities of day, similar to Dickens's portrayal of Vauxhall Gardens as a fairyland at night and dirty and dilapidated in daylight (See pp. 98-99). Under the gas, things were idealised; colours appeared more lurid and garish, makeup was softened and everything enlivened with a sense of false life. Baudrillard suggests that the idea of the 'image' moves in four phases. Gas and its light may be taken as the first three stages, in which the image is at first 'the reflection of a profound reality', which then moves on to 'mask and denature a profound reality', and thirdly evolves to 'mask the absence of a profound reality'. The fourth stage of the image, he argues, bears 'no relation to any reality whatsoever: it is its own pure simulacrum'.[260] As the gaslit city was very much the crucible that cultivated the growth of such consumer-led realities, it may not be possible to suggest that it reaches the full, fourth stage of his simulacrum as it, he argues, bears 'no relation to any reality whatsoever: it is its own pure simulacrum'.[261] However, this fourth stage will become important in later lighting developments. Gaslights themselves were a refiguring of the image of the isolated flame, and their simulated nature was further embellished by the order of them on the streets. Their light 'masked' reality at night, and created an artificial space that was populated by the ephemera of consumerism.

Gaslight and Power

Better illumination expanded visibility in areas of public display and undermined the view of Panoptic power that was once, as Chris Otter argues 'the dominant paradigm for understanding the visual operation of power in post-Enlightenment Europe'.[262] Foucault represents the Panopticon as policed by a central supervisor, metonymous of the authority of Government, who observes the prisoners, or society. The individual in the confines of the Panopticon 'is seen, but […] does not see; he is the object of

[259] Jean Baudrillard, *Simulacra and Simulation,* p. 1.
[260] Jean Baudrillard, *Simulacra and Simulation,* p. 67.
[261] Jean Baudrillard, *Simulacra and Simulation,* p. 67.
[262] Chris Otter, *The Victorian Eye,* p. 4.

information, never a subject in communication'.[263] However, within the nocturnal urban environment, visual power is not transmitted through a single authoritative position, but via a range of individuals. Deborah Epstein Nord suggests the evolution of the Panoptic principle that dictated cities' architecture and behaviour prior to the nineteenth century; she discusses Foucault's idea that the Panopticon provides power and control to the surveyor, yet highlights how in the nineteenth-century city, '[t]he urban spectator […] remains anonymous and invisible, always an observing eye whose own presence is suppressed'.[264] Although the spread of light afforded an invaluable tool to the city's observers, it meant that they too had to repress themselves in some fashion in order to avoid scrutiny themselves. Nord further suggests: 'Whether viewed from afar […] or at close range as in isolated encounters or images, the city's disruptive nature, like the prisoner's, is muted and controlled.'[265]

Everyone within the glare of gaslight may at the same time observe and be observed; vision is not absolute, but flexible. Tony Bennett analyses an emerging 'exhibitionary complex', challenging the perceived authoritarian aspect of Foucault's Panopticon and suggests instead:

> The power to command and arrange things and bodies for public display [could] allow the people, and en masse rather than individually, to know rather than be known, to become the subjects rather than the objects of knowledge. Yet, ideally, they sought also to allow the people to know and thence to regulate themselves; to become, in seeing themselves from the side of power, both the subjects and the objects of knowledge, knowing what power and what power knows, and knowing themselves as (ideally) known by power, interiorising its gaze as a principle of self-surveillance, and, hence, self-regulation.[266]

The evolving relationship between vision and power within gas-lit metropolises ensured a large number of people were able to exercise their urban gaze. As Bennett suggests, they both knew and practised power through vision. Chris Otter suggests that the flâneur, who emerged from this visual nexus, was 'drawn mothlike to the light of seduction where capitalism is illuminated and made brilliant'.[267] Gaslight was the web of visibility in which flâneurs and flâneuses enacted their desires of seeing

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[263] Michel Foucault, *Discipline and Punish,* p. 200.
[264] Deborah Epstein Nord, *Walking the Victorian Streets: Women, Representation and the City* (New York: Cornell, 1995) pp. 24-25
[265] Deborah Epstein Nord, *Walking the Victorian Streets: Women, Representation and the City,* p. 25.
[266] Tony Bennett, 'The Exhibitionary Complex' in *New Formations, no. 4, Spring 1988,* p. 76.
[267] Chris Otter, *The Victorian Eye,* p. 7.

and being seen. Walter Benjamin, writing on the flânerie of Paris, describes witnessing the streets in the alternate reality gas created:

> The street conducts the flâneur into a vanished time. For him, every street is precipitous. It leads downward – if not to the mythical Mothers, then into a past that can be all the more spellbinding because it is not his own, not private. Nevertheless, it always remains the time of a childhood. But why that of the life he has lived? In the asphalt over which he passes, his steps awaken a surprising resonance. The gaslight that streams down on the paving stones throws an equivocal light on this double ground.[268]

Benjamin draws on the traits and attributes of gaslight to offer a deeper reading of the individual self of the flâneur. The notion of 'vanished time' suggests a breach in the bounds of night's authority, and the creation of a third stage of reality that does not obey the preconceived orders of day and night or light and dark. The city-stroller enters into an environment that is new and entrancing, while also potentially seductive in its precipitousness, Benjamin suggesting a spellbinding regression to childhood. It is a space where time is multiplied and the notion of privacy is obscured, caused by gaslight's blurring of the boundaries between night and day, and past and present. It is paradoxically new, yet 'nevertheless, it always remains the time of a childhood.' The 'equivocal' light of gas is mirrored in the literary use of gaslight in the period, as it was used to both enliven the value of the *present*, yet also expose the reality of history underneath the gas-lit artifice. What gas illuminates is the 'double ground' of the flâneur's own time and the vaster history of the city.

Many people did not see the power of networked illumination as desirable. They perceived the introduction of regulated networks of gas as a sign of the industrial eradicating the value of the individual. Schivelbusch writes that 'with a public gas supply, domestic lighting entered its industrial – and dependent - stage. No longer self-sufficiently producing its own heat and light, each house was inextricably tied to an industrial energy producer'.[269] In our twenty-first century world, it is difficult to comprehend a life not connected to vast networks that provide heat, light, entertainment and communication, yet for many in the nineteenth century, this loss of personal and domestic autonomy was disconcerting:

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[268] Walter Benjamin, *The Arcades Project,* trans. Howard Eiland and Kevin McLaughlin (Cambridge, Massachusetts and London: Harvard University Press, 2002) p. 416 [M1, 2]
[269] Wolfgang Schivelbusch, *Disenchanted Night,* p. 28.

> [B]eing connected to them [the gas networks] as consumers made people uneasy. They clearly felt a loss of personal freedom. Gaslight made it impossible for people to become absorbed in contemplating the 'individual' flame of an oil-lamp or a candle […] people gazing at a gaslight no longer lost themselves in dreams of the primeval fire; if anything, they were thinking of the gas bill.[270]

For the first time, light was completely industrialised. The activity of lighting a home, or place of work, or public space, was taken out of the hands of those who occupied that space, and put into the control of a private company. The personal connection to the fire or candle was lost in the face of such networked light, an idea that resonates within its literary symbolism.

Gas, Art, and Literature

By blurring the boundaries between night and day, and real and unreal, gas found a poetic capacity within the city. Lynda Nead suggests the nature of gas's symbolic resonance:

> Gas bore witness to night scenes, to aspects of the city that were hidden by day. Street lamps represented the intrusion of daytime order and the rational space of the improved city into the darkness of the city at night. Gaslight never fully conquered the night city, however, but was also absorbed by its poetry, evil and irrationality.[271]

She notes that the 'rhythmic alternation of light and dark is an essential backdrop to the creation of the attraction and threat of the city at night', suggesting that writers linked this rhythm to 'the idea of the flight from the familiar, every day existence of the city'.[272] The temporal confusion of the lamp-lit stages of night created an uncanny sense of timelessness and hyperreal effulgence. It was a new third space and time; not quite day, yet not at all night. The pattern of life under the gas lamps inspired writers as they sought to uncover and document the secrets and phenomena of the gas-lit city night.

Nead encapsulates the ambiguous atmosphere of a gas lit city-scene: 'Gas created a dream world, which blurred the uncertain boundaries between the real and imagined.'[273] She draws out the uncanny nature of the mirrored doubling of the life of

[270] Wolfgang Schivelbusch, *Disenchanted Night,* p. 29.
[271] Lynda Nead, *Victorian Babylon,* p. 83
[272] Lynda Nead, *Victorian Babylon,* p. 102.
[273] Lynda Nead, *Victorian Babylon,* p. 100.

the street and of the stage by pointing to Dion Boucicault's *The Streets of London,* which recreated scenes of gas-lit London streets in the theatre. Nead's study of contemporary reviews of the play identifies the 'repeated emphasis on the realism of the scene,' which, 'conveys some of the astonishment that audiences felt as the curtains opened to reveal the crowded, gaslit streets of mid-Victorian London'.[274] In a very Baudrillardian sense, the reality of life became even harder to identify; the costumes worn on the stage set were imitations of those worn on the street, which were in turn influenced by what audiences saw on the stage, the gas enlivening them all.

Artists and writers were aware of these effects; they frequently acknowledge gas's potential to imbue scenes of life with an altered sense of reality, and utilise gas's tendency to emphasise and expose. Vincent Van Gogh, writing to his brother from the town of Arles, extolled the virtues of gaslight in his own art:

> Paris will be very beautiful in Autumn. The town here is nothing, at night everything is black. I think that plenty of gas, which is after all yellow and orange, heightens the blue, because at night the sky here looks to me – and it is very odd – blacker than Paris. And if I ever see Paris again, I shall try to paint some of the effects of gaslight on the boulevards.[275]

Vincent Van Gogh, 'Starry Night Over the Rhone' 1888.

Van Gogh's own technique and style was highly suited to the efficacy of gaslight. He described 'Starry Night Over the Rhone' as artistically using the contrast between gas

[274] Lynda Nead, *Victorian Babylon*, p. 99.
[275] Vincent Van Gogh, *The Complete Letters of Vincent Van Gogh, vol. 3* (Greenwich: New York Graphic Society, 1959) p. 75.

and natural light: 'On the aquamarine field of the sky the Great Bear is a sparkling green and pink, whose discreet paleness contrasts with the brutal gold of the gas.'[276] Gaslight has a distinct presence, a bold brutality that enlivens the scene and threatens the delicacy of the natural. The gas-lit urban sky is blue and alive, as opposed to the black and oppressive country sky; it speaks of vibrancy, not the 'nothing' Van Gogh experiences in the countryside.

Edgar Allan Poe described the effects of gas illumination in his highly journalistic 'The Man of the Crowd.' His narrator sits and watches London life as it evolves from daylight into scenes lit by gas:

> As the night deepened, so deepened to me the interest of the scene; for not only did the general character of the crowd materially alter (its gentler features retiring in the gradual withdrawal of the more orderly portion of the people, and its harsher ones coming out into bolder relief, as the late hour brought forth every species of infamy from its den), but the rays of the gas-lamps, feeble at first in their struggle with the dying day, had now at length gained ascendancy, and threw over every thing a fitful garish lustre.[277]

Here we may see almost all of gaslight's associations and poetics. The street is treated as a 'scene', which gains depth through the illumination of gaslight. The narrator remarks on how the gas can alter ideas of image and perception, suggesting not only that gas can bring out the 'fitful, garish lustre' of modern city culture, but also call forth 'every species of infamy from its den'. It enables us to see the changing face of society as the gaslights are lit, and shows the type of people who emerge in gas-lit evening. He describes how the crowd 'materially alter', a possible reference to the material passions of the leisure class, as the 'species of infamy' are drawn out. The gas-lit space is one of 'infamy', yet due to the nature of this light, the 'bolder relief' of gas's harshness supervises the scene. Gaslight throws the 'materially' altered culture into the forefront of perspective, yet also paradoxically beautifies *and* exposes the sham falsities of such a society. Poe suggests an undercurrent to the glamour of gaslight in the city, showing that there was an oft unacknowledged power to the gas, which grew in its 'ascendency' as the night deepened.

Similarly, Charles Dickens wrote on the altered state of life under gaslight in his 'Night-Walks' articles, collected and published in *The Uncommercial Traveller*.

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[276] Letter from Vincent Van Gogh to Theo Van Gogh, Arles 28 September 1888, from http://www.webexhibits.org/vangogh/letter/18/543.htm [accessed on 22/9/15]
[277] Edgar Allan Poe, 'The Man of the Crowd' in *The Portable Edgar Allan Poe* (New York: Penguin, 2006) p. 233

He comments directly on the disparity between London and Paris under gaslight: 'London is shabby by daylight, and shabbier by gaslight. No Englishman knows what gaslight is, until he sees the Rue de Rivoli and the Palais Royal after dark.'[278] The light exaggerates, whether it is shabbiness or grandeur. Dickens also highlights an important comparison in the history of gas's development both technologically and culturally. While the effects of gas's light could be found wherever it had been installed, the ultimate example of its powers of artifice and effulgence was Paris, as documented by Émile Zola in his Rougon-Macquart series. The city was completely redesigned from around 1850 to 1870, with gas lighting at the forefront of its architectural revolution. Baron Haussmann's renovations of Paris rejuvenated the city, and its wide boulevards and open public squares made it the centre of new cultures of display and vision. The city even earned itself the nickname 'The City of Light'.[279] It was a city that glorified gas lighting and revelled in its glow.

Gas lamps both illuminate and represent Émile Zola's Naturalist Paris. The light source allowed Zola to be, as he himself wished, 'the scientific observer and experimenter',[280] as it provided him with a ferociously lit Parisian laboratory. The light also became a metaphor for his protagonists and antagonists, who were 'deprived of free will and drawn into every action of their lives by the predetermined lot of their flesh',[281] subject to unavoidable external influences just as much as the flame of a gas lamp was to the central power that drove its networks.

Zola used Paris as the setting for most of his Rougon-Macquart sequence of novels, which detail the history of a family throughout nineteenth-century Paris and France. Gaslight plays an important role in his works, not only in lighting his literary spaces, but also in Zola's ideas of vision, as, according to Philip Walker, he:

> [H]as done far more than create a world; he has imposed on us a mode of vision. He was a man obsessed with the phenomena of optics and the psychology of perception – a man, furthermore, for whom sight and insight, vision and understanding, were intimately, even inextricably, related.[282]

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[278] Charles Dickens, *The Uncommercial Traveller* (Cambridge: Riverside Press, 1869) p. 351
[279] David Downie, *Paris, Paris: Journey into the City of Light* (New York: Random House, 2011)
[280] Philip Walker, *Emile Zola: Profiles in Literature* (London: Routledge and Kegan Paul, 1968) p. 9
[281] Émile Zola, 'Preface to the Second Edition' in *Thérèse Raquin* trans. Brian Nelson (London: Penguin, 2004) p. 4
[282] Philip Walker, 'The Mirror, The Window, and the Eye in Zola's Fiction' in *Yale French Studies, No. 42, Zola* (1969) p. 52.

Gas offered Zola not a simulation of daylight, but a *different* mode of vision. Gaslight, visibility within the city, and ideas of reality all intertwine within Zola's work. Zola's texts are important to the study of literary gaslight, as the presence of it in his Paris, and his self-enforced role as naturalist observer mean that his characters interact with it in particularly valuable ways. The following sections of this chapter will further investigate the ramifications of gaslight culture in Zola's works. Alongside Zola, and Paris, English authors such as Dickens and Oscar Wilde, and their work on London, will be studied as themes and parallels emerge in the treatment of gaslight in the growing metropolitan centres of the nineteenth century.

3.2 The Networked City: Gaslight on the Streets and Arcades

The night-time streets of the great nineteenth-century metropolises were an enticing prospect to any would-be urban explorers. Gas mapped the streets and public spaces of cities such as London and Paris in a way that had rarely been seen before. Lynda Nead, writing on an 1865 account of a hot-air balloon trip over London at night suggests that to the nineteenth-century observer: 'London is redrawn by gaslight; the codes of the paper map are replaced by alternating lines of light and passages of darkness.'[283] Balloon ascents were a common attraction to the pleasure seeking nocturnal citizen, contemporary accounts of such trips describing how the city below was turned into a 'fire map'[284] by gaslight. There are parallels that may be drawn between Nead's analysis and Baudrillard's ideas – he exemplifies the hyperreal in the Borges fable in which cartographers draw up a map of the Empire so detailed that it covers the entirety of the Empire itself:

> The territory no longer precedes the map, nor does it survive it. It is nevertheless the map that precedes the territory – precession of the simulacra – that engenders the territory; and if one must return to the fable, today it is the territory whose shreds slowly rot across the extent of the map.[285]

Gas lamps colonized the night with their glow, and redrew the geometry of the night-time cityscape; they tinged the previously natural reality of night with false day-like qualities, creating a space of heightened artificiality. The author of *Berlin Becomes a Metropolis* wrote similarly of the German capital in 1868:

> Since the invention of gaslight, our evening life has experienced an indescribable intensification, our pulse has accelerated, nervous excitation has been heightened; we have had to change our appearance, our behaviour and our customs, because they had to be accommodated to a different light.[286]

There was an 'intensification' of life and concepts of reality on the streets at night. Even more so than in the enclosed spaces of the theatre or department store, the city and its inhabitants started to be mapped and ordered by the codes of gaslight.

Gas's literal networks - pipelines that were installed all over the city – symbolized the layered networks of consumerism, commerce and social behaviours that were also influenced by its light. Through the enhanced visibility the lamps

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[283] Lynda Nead, *Victorian Babylon,* p. 85.
[284] 'Balloon Ascent from Cremorne, Night of Wednesday July 24th 1861' in Lynda Nead, *Victorian Babylon,* p. 86.
[285] Jean Baudrillard, *Simulacra and Simulation,* p. 1.
[286] *Berlin Becomes a Metropolis, 1868* quoted in Joachim Schlör, *Nights in the Big City: Paris, Berlin, London 1840-1930,* trans. Pierre Gottfried Imhof and Dafydd Rees Roberts (London, 1998) p. 287.

provided, and the regular, almost military, positioning of the lamps along the streets of the big Western metropolises, the public began to acknowledge their own position within these webs of artifice. Julien Green's *Épaves* features a description of the change that occurred in Paris when the lights were lit:

> The gaslight brings about this transformation. At first the ray of this sun, the nocturnal land decks itself out with shadows, and matter takes on sinister and fantastic new skins. The smooth sensual trunks of the plane trees seem suddenly made of leprous stone, while the paving stones imitate the tones and rich marblings of drowned flesh; even the water is covered in metallic glints; everything abandons its familiar daytime appearance to don the look of lifelessness.[287]

Green's depiction of night-time Paris picks up on the 'transformation' the city went through as the gaslights began to emerge from the darkness. The image of 'matter' taking on 'sinister and fantastic new skins' suggests an environment that is not only false but theatrical, while the very deathly portrayal of gaslight's effects upon the trees and pavements of Paris overhauls familiar reality and replaces it with something not quite dead, yet not quite alive. Green's vision of 'the look of lifelessness' that the gas created embellishes the effect of gas-lighting on the streets of the nineteenth-century city; it was not lifelessness as such, but more an atmosphere of false life.

While in gas's light, one can perceive, yet the individual doing so must understand that this also opens them up to the gaze of others, turning them into a participant within a social network of visibility. Although similar to the candle's equally dual nature of safety and entrapment, gaslight lacked the personal and individual qualities of the candle. Instead, the impartiality of the gaslight lessened the personal connectiona human may have found within its light. George Augustus Sala elaborates on this as he writes of gas-lit London:

> He who will bend himself to listen to, and avail himself, of the secrets of the gas, may walk through London streets proud in the consciousness of being an inspector – in the great police force of philosophy – and of carrying a perpetual bullseye in his belt.[288]

One must 'bend' themselves to the secrets of the gas, in order to be both 'inspector' and object of scrutiny, as suggested by the 'perpetual bullseye'. Unlike the candle's single fragile flame, gas was regimented in its network; it still retained artificial

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[287] Julien Green, *Épaves* quoted in Paul Morand 'Preface' to *Paris by Night* (New York: Pantheon Books, 1987) *No page numbers.*
[288] George Augustus Sala, 'The Secrets of the Gas' in *Household Words 9* (March 4, 1854) p. 159.

light's potential to both reveal and entrap, yet these aspects were slightly altered due to the loss of individual lighting autonomy in gaslight's regulated spaces. A. Roger Ekirch emphasises the nature of gas-light's repression in his conclusion to *At Day's Close:* 'If night became more accessible, it also became less private […] not only could the human eye now see a farther distance, but there were infinitely more eyes in public by which to be observed.'[289] He gives the example of London barrister, George Price, who was charged with indecent exposure after he was caught urinating near a streetlamp in 1825. Ekirch notes that 'such behaviour in the darkness of night had been customary. By necessity, personal conduct in public grew more repressed,' before adding 'sexual liaisons, even romantic gestures, needed to be more circumspect, as did control of one's bodily impulses'.[290]

Sala, in *Gaslight and Daylight, with some London Scenes they Shine Upon,* terms the atmosphere of gas 'the one-half world', which he constantly refers to as full of 'secrets'.[291] He calls it the 'trusty, silent, ever-watchful gas';[292] it is a companion to him in his night walks, yet still extremely mysterious. The gas observes, but does not truly reveal. Instead, it creates the half-world he speaks of, as it conceals secrets in its glow, yet also promises answers: 'Gas to teach me; Gas to counsel me; Gas to guide my footsteps, not over London flags, but through the crooked ways of unseen life and death, of the doings of the Great Unknown, of the cries of the Great Unheard.'[293] It is a similar experience to Benjamin's precipitous flânerie under the lights of Paris. In both instances the gaslights blur timeliness for the two writers; they do not simply light the way before them, but illuminate the infinite time of past, present and future, and the 'crooked ways' that delineate life and death. Although mainly writing of London, Sala also found it unavoidable to compare the lights of the city to the effects of Paris's gas. He ruminates on the death and terror the Paris gaslights must have borne witness to, and *observed:* 'The Gas saw the blood that was brought from the shambles and smeared over the pavement of the Paris boulevards.'[294] Gaslight was a symbol of modernity, a sign of interconnected industry that heralded the potential of the future, yet also acted as a constant reminder of the bloodshed of the past, and the turbulence of revolutionary France in Paris in particular. This melding of history and

[289] A. Roger Ekirch, *At Day's Close,* p. 333.
[290] A. Roger Ekirch, *At Day's Close,* p. 334.
[291] George Augustus Sala, *Daylight and Gaslight, with some London Scenes they Shine Upon,* p. 159.
[292] George Augustus Sala, *Daylight and Gaslight, with some London Scenes they Shine Upon,* p. 159.
[293] George Augustus Sala, *Daylight and Gaslight, with some London Scenes they Shine Upon,* p. 159.
[294] George Augustus Sala, *Daylight and Gaslight, with some London Scenes they Shine Upon,* p. 158.

possibility adds to the altered notion of time the gas-lit third reality had began to create in this period.

Gaslight, and the growth of nocturnal public display and spectacle, led to the street being an area of remarkable visibility, which was often contrasted with the darkness of back-alleys and smaller lanes, and the vision-obscuring fog of the larger cities. Charles Baudelaire described the Parisian gas lamp as a 'bloody eye that pulses as it stares, / The lamp will cast a stain of red through the air'.[295] Again, there is a sense of surveillance and danger present in the depiction of gas lamps similar to Sala's description of the 'perpetual bullseye', as they stare with a red eye over those who inhabit their illuminated space. Similarly, Oscar Wilde's 'Impression du Matin,' pairs images of the encroaching gaslight of London at dusk with the notion of enflamed passions and possibility:

> The yellow fog came creeping down
> The bridges, till the houses' walls
> Seemed changed to shadows and St. Paul's
> Loomed like a bubble o'er the town.[296]

The yellow fog, tainted by gaslight, overwhelms the city in shadow, as the figure of St. Paul's – symbol of religion and authority – looms over the darkening town. It is as if gaslight and night draw a veil over the reality of the scene, repressing true natures and encasing London within an atmosphere of stifling headiness. This idea may also be witnessed as Wilde describes the prostitutes who 'Loitered beneath the gas lamps' flare, / with hips of flame and heart of stone' (ll. 15-16). Gaslight aids the prostitutes; it provides them with a means of displaying themselves to possible consumers as they stand beneath the lamps like mannequins in a shop window. Walter Benjamin described the figure of the prostitute as the apotheosis of modern consumer culture, stating that they may be considered 'a precursor of commodity capitalism,'[297] as they could be considered 'seller and sold as one'.[298] Their image is tainted by the gaslight, often making them look more desirable; Gervaise in Zola's *L'Assomoir,* when considering prostituting herself, thinks: 'Now that really was a terrific idea! At night,

[295] Charles Baudelaire, 'Dawn' in *The Flowers of Evil,* trans. James McGowan (Oxford: Oxford University Press, 2008) p. 211, ll. 5-6.
[296] Oscar Wilde, 'Impression du Matin' in *Complete Poetry* (Oxford: Oxford University Press, 2009) p. 129, ll. 5-8
[297] Walter Benjamin, *The Arcades Project,* p. 348.
[298] Walter Benjamin, *The Arcades Project,* p. 11.

by lamplight, she could still make a catch.'[299] They are swathed in spectacle, their eroticism and exterior image displacing their independent autonomy as they market themselves beneath the gaslight. They must perform beneath the gas, just as actresses must perform under stage lights, and repress their true selves in order to ensnare customers within both their own glare and gaslight's.

The great metropolises of the nineteenth century saw their private and public boundaries blurred by the increasingly liminal differentiation between night and day, and light and dark. The Arcades of London and Paris suggested a transient space within their glass confines, an optically diverse place where vision was seductive. Isobel Armstrong describes the Pantheon Arcade in London as showing 'how the erotics of the glass fantasia, a fecund romanticised space, were superimposed on the urban landscape'.[300] Within Paris especially, the melding of the privacy of indoor spaces with the freedom of the exterior, provided its citizens with a new, highly-visual arena of social interaction and economic exchange. They take on an important role within Zola's literature, Stuti Khanna suggesting that in Zola's Paris, 'the arcades function as symbols of a glittering, corrupt city'.[301] Walter Benjamin even described the Arcades as a microcosm of Paris: 'the passage is a city, a world in miniature.'[302]

The Parisian Arcades and Markets encapsulated ideas of the alluring temporal geometry of an outside space brought inside, and a shopping space that did not adhere to preindustrial opening hours. Thanks to gaslight, such spaces flourished in Baron Haussmann's renovated city. Walter Benjamin quotes from Julius Rodenberg: 'The coulisse [arcade] guaranteed the ongoing life of the Stock Exchange. Here there was never closing time; there was almost never night.'[303] The associations of gaslight on the street are subtly changed when taken into an indoor area. Ideas of artificiality and the *play* of consumer-life on the streets, as well as the repression and desire that resonated on the boulevards and the politics of vision and control, are all exaggerated through interiorisation.

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[299] Émile Zola, *L'Assomoir,* trans. Margaret Mauldon (Oxford: Oxford University Press, 2009) p. 405.
[300] Isobel Armstrong, *Victorian Glassworlds: Glass Culture and the Imagination 1830-1880*, p. 140.
[301] Stutti Khanna, *The Contemporary Novel and the City: Re-conceiving National and Narrative Form* (Basingstoke: Palgrave-Macmillan, 2013) p. 81.
[302] Walter Benjamin, *The Arcades Project,* p. 14.
[303] Julius Rodenberg, *Paris bei Sonnenschein und Lampenlicht* (Leipzig, 1867), p. 98 in Walter Benjamin, *The Arcades Project* trans. Howard Eiland and Kevin McLaughlin (Cambridge, Massachusetts and London: Harvard University Press, 2002) p. 38.

Sharon Marcus suggests that opposite, yet distinctly related, ideas of private and public spaces were incredibly important to Haussmann's Paris: 'Private life did not emerge only as the nostalgic and belated antidote to an expanded public realm, rather, Haussmannisation itself directly promoted the containment of urban spaces.'[304] In Paris, with shades of this phenomenon also cast over London and other major cities, private life and public life intermingled as the outside was brought in. Marcus writes: 'Haussmann literally interiorised many of the city's common areas by enclosing activities and sites that had formerly been open and coextensive with the street.'[305] Walter Benjamin suggests that this was the period in which the 'liquidation of the interior' occurred, suggesting fluidity between interior and exterior; he argued that 'the true framework for the life of the private citizen must be sought increasingly in offices and commercial centers'.[306] In Benjamin's vision, the development of public interior spaces changed the 'framework' of life for the individual, as more and more people began to prefer the alternative reality that gas and glass-lit life provided. Haussmann's process of covering the outdoors served to add to the image of the city as a network – the theatre, the department store, and now the Arcades were individual lamps casting their own glow on the gas-mapped streets of Paris.

The Arcades encouraged the spectacle of consumerism. They were erected as huge constructions made to both hide the undesirable visual effects of consumption, and celebrate the role of shopping and spending within the Second-Empire city. Benjamin acknowledges how the Arcades changed the shape of trade:

> Trade and traffic are the two components of the street. Now, in the arcades the second of these has effectively died out: the traffic there is rudimentary. The arcade is a street of lascivious commerce only; it is wholly adapted to arousing desires.[307]

By interiorising trade from the streets, arcades and markets managed to avoid the undesirable side effects of the outdoor space – weather, traffic, and mud for example – and focus entirely on exciting consumer desires.

The Arcades were Haussmann's ideal Paris in microcosm. They focused the identity of the city into a contained environment resonant with condensed symbology and associations. Similarly to the fantastical depictions of Vauxhall Gardens in

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[304] Sharon Marcus, *Apartment Stories: City and Home in Nineteenth-Century Paris and London* (California: University of California Press, 1999) p. 139.
[305] Sharon Marcus, *Apartment Stories: City and Home in Nineteenth-Century Paris and London*, p. 139
[306] Walter Benjamin, *The Arcades Project,* p. 20.
[307] Walter Benjamin, *The Arcades Project,* p. 42

Dickens and Collins, and of Queen Victoria's impressions of the Crystal Palace as 'almost fairy like',[308] Benjamin suggested the arcades 'radiated through the Paris of the Empire like fairy grottoes. For someone entering the Passage des Panoramas in 1817, the sirens of gaslight would be singing to him on one side'.[309] The gas is seductive and magical, emphasising the dangerous allure of consumerism. Similarly, Benjamin quotes from Gobard's *L'Architecture de L'avenir*:

> Glass is destined to play an important role in metal-architecture. In place of thick walls whose solidity and resistance is diminished by a large number of apertures, our houses will be so filled with openings that they will appear diaphanous. These wide openings, furnished with thick glass, single – or double – panelled, frosted or transparent, will transmit – to the inside during the day and the outside at night – a magical radiance.[310]

The encapsulation of life into such glass-houses caused this ideal fantasy image to be quite literally framed; Gobard's descriptions of how radiance is transmitted differently between night and day are indicative of the complexity of gas-lit vision when multiplied by windows and glass. The transparency of glass, combined with the seduction of gas, created the liminality that made the Arcades and Markets so enticing and bewildering.

David Harvey suggests that such spaces were developed to add legitimacy to the cultural policies of the new governmental regime in Paris and France. The other-worldliness and relentless display present in the gaslit glasshouses encouraged the populace to spend and consume, a cornerstone of Napoleon III's economic policies and prosperity:

> The permanent monumentality that accompanied the reconstruction of the urban fabric (the design of spaces and perspectives to focus on significant symbols of imperial power) helped support the legitimacy of the new regime. The drama of the public works, and the flamboyance of the new architecture emphasised the purposive yet festive atmosphere within which the imperial regime sought to envelop itself.[311]

Harvey suggests the material glorification of consumerism and commercialism through architecture, although many still opposed the rapid reinvention of the city. Charles Baudelaire extolled his despair at the new Paris in 'The Swan':

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[308] *The Great Exhibition of 1851: Commemorative Album.* (London: Victoria & Albert Museum, 1964) p. 15
[309] Walter Benjamin, *The Arcades Project,* p. 564.
[310] Gobard, 'L'Architecture de l'avenir' in *Revue générale d'architecture* (1849) quoted in Benjamin, Walter, *The Arcades Project,* trans. Howard Eiland and Kevin McLaughlin (Cambridge, Massachusetts and London: Harvard University Press, 2002) p. 564.
[311] David Harvey, *Paris: Capital of Modernity* (New York: Routledge, 2006) p. 210.

> Paris may change, but in my melancholy mood
> Nothing has budged! New palaces, blocks, scaffoldings,
> Old neighbourhoods, are allegorical for me,
> And my dear memories are heavier than stone.[312]

Baudelaire's neighbourhoods become nothing more than allegory, as modern Paris takes shape, yet to him, his memories are stronger than the modern constructions of Paris. Instead of seeing the new Paris, the rapid Haussmanisation returns him to the memories of his city in times past – similar again to Benjamin's gas-lit timeless experience of Parisian flânerie.

Baudelaire's description of his 'Parisian Dream' makes similar thematic allusions to the arcades:

> Babel of endless stairs, arcades,
> It was a palace multifold
> Replete with pools and bright cascades
> Falling in dull or burnished gold.[313]

Baudelaire's dream replicates the architecture of the arcades, of 'the ravishing monotony / Of marble, metal, water-flow' (ll. 11-12). He seems to be overwhelmed by the constant reproduction of imagery within the arcades; his reference to the building materials, and the paradox between the words 'ravishing' and 'monotony' help to suggest the confusing regularity of the arcade's construction. There is something unnatural and unnerving about such regular images, Baudelaire stating himself that:

> By whimsy odd and singular
> I've banished from these spectacles
> Nature and the irregular (ll. 6-8).

This sense of artificiality within his dreamlike depiction of the arcades is encouraged further by his references to the lighting of the scene:

> No star from anywhere, no sign
> Of moon or sunshine, bright or dim,
> Illuminate this scene of mine
> Glowing with fire from within! (ll. 45-48)

The brilliancy of the arcade's gaslight, reflected manifold in the glass of the ceiling and shop fronts make it appear as though the space is blazing with fire from within.

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[312] Charles Baudelaire, 'The Swan' in *The Flowers of Evil* trans. James McGowan (Oxford: Oxford University Press, 2003) p. 175, ll. 29-32.
[313] Charles Baudelaire, 'Parisian Dream' in *The Flowers of Evil,* p. 207, ll. 13-16.

Nature had been subdued, both in the artificial repetition of the arcades' architecture, and in the replacement of the light of the sun and stars with that of gas. The arcades were an attempt at replicating street-life inside, a symbol of the power of consumerism and an icon to modern technologies such as gaslight and sheet glass working.

Gaslight on the Literary Streets of Wilde and Zola

Gaslight's illumination enforced visual repression of both identity and desire on streets and in public spaces through an engagement with the performative self, which was integral to leisure-class behaviour from the mid-century onwards. This may be seen in Oscar Wilde's *The Picture of Dorian Gray* (1890). As Dorian's desire and energy for sensation heightens, the enlivening attributes of gas tease his senses: 'I used to look at every one who passed me, and wonder, with a mad curiosity, what sort of lives they led. Some of them fascinated me. Others filled me with terror. There was an exquisite poison in the air. I had a passion for sensations.'[314] Dorian is enveloped by the overwhelming surge of sensate interaction in the gas-lit streets of London; he becomes fascinated by simply watching and observing the people who populate the social areas. While these sights inspire his passions, the authority implied through a visually-focused society forces him to repress instincts to act on his passions. He wishes to move to an area of the city where he can 'buy oblivion' (p. 176) as in the gaslit, self-regulating visual society, he cannot sate his darker passions and desires.

He moves to the margins of London, out of the gaslight's map of fire and towards the darker reaches of the city. As he transcends the charted and known areas of the city, he constantly reminds himself of Lord Henry's advice: 'To cure the soul by means of the senses, and the senses by means of the soul' (p. 176). This cyclical epigram is mirrored in Dorian's relationship with gaslight; gaslight spurs his senses, drives him wild with sensation, only to force him to repress them in a completely visual society where every individual within has the capability for surveillance, a form of *polyopticon.* He must move beyond the boundaries of the regulated society of gas-lit London:

[314] Oscar Wilde, *The Picture of Dorian Gray* (London: Penguin Books, 2003) p. 48. All further extracts from this work will be given in the main body of text unless otherwise stated in the footnotes.

> The moon hung low in the sky like a yellow skull. From time to time a huge misshapen cloud stretched a long arm across and hid it. The gas lamps grew fewer, and the streets more narrow and gloomy. Once the man lost his way and had to drive back half a mile. A steam rose from the horse as it splashed up in the puddles (p. 176).

Dorian exists in a liminal position at this point; he has moved beyond the confines of the gas-mapped area of the city. This is mirrored in Dorian's lessening grasp on his own morality, and the growing influence of his repressed desires. As he moves towards the opium den, the space and light he inhabits get smaller and darker, until at last it is impossible for society to enforce any visual repression upon him. Wilde describes Dorian's approach:

> After some time they left the clay road and rattled over rough-paven streets. Most of the windows were dark, but now and then fantastic shadows were silhouetted against some lamplit blind. He watched them curiously. They moved like monstrous marionettes and made gestures like live things. He hated them (p. 177).

Dorian's disgust at the silhouetted people in the windows indicates his yearning to move away from light, and by extension his desire to move beyond where he is observable. The gas-lit culture of vision and display appals him at this stage, and he acknowledges its artifice: 'Ugliness that had once been hateful to him because it made things real, became dear to him now for that very reason. Ugliness was the one reality' (p. 177). Dorian becomes so detached from the world that enflames his passions with its gaudy, lurid beauty, that he begins to see ugliness, or the antithesis of aesthetic visual society, as what creates reality. He begins to value the darkest depths of life itself more than he did the flaring passions of the theatre-like life of visual London. He moves out of the light in search of the finality and realness of oblivion.

This idea is even more obvious in Émile Zola's Paris. If London was, as Henry James put it 'a city so clumsy and brutal, [that] has gathered together so many of the darkest sides of life',[315] then Paris was a much more focused vision. Due to its renovations, Paris was spatially restructured to benefit the power of visibility and the enjoyment of spectacle and display. Zola's depiction of the Coupeau's district in *L'Assomoir* (1877) suggests the disparity between the new, visual Paris, and the older, darker recesses of the city: 'The Rue du Faubourg-Poissonnière and the Rue des

[315] Henry James 'London' quoted in James A. Clapp, *The City: A Dictionary of Quotable Thoughts on Cities and Urban Life* (New Jersey: Transaction, 2014) p. xxiii

Poissonniers […] were cropped and scarred at the points where they joined the boulevards and twisted away as dark, serpentine alleys.'[316] Sharon Marcus states that when undertaking the renovations, Haussmann and Napoleon III 'explicitly took London as a model, in ways that the English themselves merely registered; most British writers starkly contrasted the two capitals'.[317] The two cities shared certain traits, which Paris emphasised due to its complete overhaul from the mid-century onwards, the contrast with the older areas of the city emphasised by the growing gulf of light in such public spaces.

On the streets of Zola's Paris, we may see a constant struggle between reality and unreality. Gaslight creates a sort of fairy-tale world, a realm that functions on visible *signs* of reality, as opposed to reality itself. The light of the lamps, as well as having clear associations with this new culture, imbues everything with an otherworldly yellow glow. Aristide Rougon is entranced by the new Paris when he reenters for the first time since the renovations in Zola's *The Kill* (1872)*:* 'He had not been in Paris since the happy year he had spent there as a student. Night was falling: the bright light thrown on the pavements by the shops and cafes intensified his dreams. He no longer knew where he was.'[318] He is overwhelmed by the newly hyperreal Paris, the narrator suggesting that 'The Paris air intoxicated him' (p. 42). His passions are enflamed, yet the artificiality of the scene is something he cannot entirely comprehend.

Rougon, who later renames himself Aristide Saccard, soon becomes indoctrinated into Paris's new networks, and attempts to gain financial control over them. Zola uses the city's 'fire map' to replicate the new economical web that had been spun over Paris. Before Saccard's wife Angele's death, she and Saccard stand at the window of a café, overlooking the Parisian rooftops and streets below: 'Here and there the white patch of a wall could still be made out; and the yellow flames of the gas jets pierced the darkness one by one, like stars lighting up in the blackness of a stormy sky.' To the two of them gazing at this new Paris from above, the gaslights' glow appears to be the puddles left after 'a fine shower of twenty franc pieces' (pp. 69-70). Zola creates a direct correlation between the modernity of gaslights and the

[316] Émile Zola, *L'Assomoir,* p. 406.
[317] Sharon Marcus, *Apartment Stories,* p. 135.
[318] Émile Zola, *The Kill,* trans. Brian Nelson (New York: Oxford University Press, 2008) p. 42. All further extracts from this work will be given in the main body of text unless otherwise stated in the footnotes.

commercial and economic passions of Second Empire Paris, as 'the gaslight seemed to be heaping up their specks of gold in two rows' (p. 70). Saccard's physical position, observing Paris with a shrewd eye from above, is indicative of the power he desires. He anticipates, and draws direct parallels to, the link between gaslight's networks and those of consumerism as he states: 'There will be a third network, but that one is too far off yet, I can't see it as clearly. I've heard only a little about it. It will be sheer madness, an orgy of spending, Paris will be drunk and overwhelmed' (p. 69). Saccard, master financial speculator, multiplies the networks even further, deepening the connection of gas lighting's infrastructure to layers of pleasure and spending.

Saccard's drawing together of networks of consumerist desire, sexual desire and gaslight further suggests an atmosphere of Baudrillardian hyperreality. Baudrillard speaks of desire being manipulated in an attempt to 'reinject realness and referentiality everywhere', in order to convince us of the 'reality of the social'.[319] Desire, in the consumerist network of Paris, reinforces a sense of false reality. William Pawlett suggests that consumerism and sexual desire are inseparable: 'Consumerism, then, is sexual *in its form as well as in its content,* and this is crucial to its ability to reproduce and expand, to enchant and compel.'[320] The emergence of consumerist networks, and the expansion of vision, in the metropolises of the nineteenth century resulted in erotic desire and consumerist desire being both promoted and repressed under the gaslights. It functioned similarly to Baudrillard's views on advertisement, consumerism and fashion: '[they] deny the body as flesh in their evocation of body as *sign.*'[321] Behaviour and desire moved from being dictated by the body as *flesh* under the gaslights, towards being affected by gas promoting the potential of improvement through consumerist *signs*, resulting in the necessary repression of body and behaviour under such visually accessible illumination. Gas espoused desire by making things more visible and seductive, yet also exposed an absence of reality through its artifice. Baudrillard describes the process of capitalism as happening when: 'Desire is sustained only by want. When desire is entirely on the side of demand, when it is operationalised without restrictions, it loses its imaginary,

[319] Jean Baudrillard, *Simulacra and Simulation*, p. 64.
[320] William Pawlett, *Jean Baudrillard: Against Banality* (Abingdon: Routledge, 2007) p. 18.
[321] William Pawlett, *Jean Baudrillard: Against Banality,* p. 94.

and therefore, its reality; it appears everywhere, but in a generalised simulation.'[322] Desire on the gas-lit city streets 'appears everywhere', yet the reality this creates is almost entirely artificial and is repressed through surveillant visibility.

There is an example of gaslight's seductive yet repressive nature in the scene Reneé and Maxime witness outside the Café Anglais in *The Kill:*

> The endless procession, a crowd strangely mixed and always alike, passed by with tiring regularity in the midst of the bright colours and patches of darkness, in the fairy-like confusion of the thousand leaping flames that swept like waves from the shops, lending colours to the windows and kiosks, running along the pavements in fillets, in fiery letters and designs, piercing the darkness with stars, gliding endlessly along the roadway (p. 126).

Zola's description of this scene is loaded with oppositional metaphors that add to the layers of simulated reality. The crowd is 'strangely mixed yet always alike' as they inhabit 'bright colours and patches of darkness', and the flames of the gaslights 'swept like waves from the shops'. Zola's dichotomous imagery creates 'fairy-like' confusion as the scene approaches Baudrillardian hyperreality. Consumerism feeds the street's movement, creating a networked society as the people proceed down the street with relentless regularity, consuming yet not really knowing why. Zola states that 'in the blaze' of the Café's gaslamps, Reneé and Maxime saw 'the pale faces and empty smiles of the passers-by' (p. 126), a procession of 'mechanical dolls' set into the circuitry of networked gaslight and consumption. The artificial aura of gaslight emphasises the false satisfaction felt in this city where the consumerist matrix encourages the mobility of desire.

Looking through the window of the Café Anglais, Maxime and Reneé watch the prostitutes, who, 'in their long-trained dresses, by turns garishly illuminated and immersed in darkness, seemed like apparitions, ghostly puppets moving across a floodlit stage set' (p. 129). In this instance sexual desire is replaced by a sequence of performative actions. The gaslights of the boulevard are the stage lights that enable women to commodify and display themselves, drawing attention to their aesthetic surface, and turning desire (both sexual and consumerist) into something artificial. We may read another example of this in *L'Assomoir,* as Gervaise attempts to prostitute herself under the gas-lamps to feed her food addiction:

[322] Jean Baudrillard, *Seduction,* trans. Brian Singer (Macmillan, 1990) p. 5.

> Gaslights were being lit as the foggy, smoke-laden darkness fell; and the long avenues that had been gradually disappearing into the engulfing blackness were re-emerging aglow with light, stretching out and streaking through the night as far as the dimly shadowed horizon. You could feel a great breath of life as the neighbourhood staked out its increased size with cordons of little flames, under the huge moonless sky.[323]

The gaslight is Paris's exhalation, a 'great breath of life' after the death of day and the birth of alternative gas lit reality. The city's image is mapped by gas, controlled and 'cordoned', as the darkness closes in before it is reborn within the 'blazing lines of the boulevards' (p. 412). The end of day is described as when 'the sun had blown out its candle' (p. 409). The candle is established as the light of truth and reality, its associations with individuality contrasting with the networked nature of gas. Gervaise herself has symbolic links to the candle; it seems to display stark truths about her life throughout the novel – Gervaise and Lantier argue over their relationship by the light of a candle (p. 50), the candle's glare shows Coupeau covered in vomit passed out in their room (p. 269), she is even described as being used up by Coupeau and Lantier like 'burning both ends of a candle' (p. 286). Furthermore, emphasising how she is lost to the public glare of gas-lamps, Zola remarks that once she has pawned everything in her home for money to fuel her food addiction and her husband's drinking, all she has left is 'a broken old pair of candle-snuffers for which the dealer refused her a sou' (p. 392). The candle-snuffers have lost their value as commodity in the gas-lit age. More symbolically, Gervaise has lost the ability to control her own light and privacy, the human link with her candle is broken, and she inhabits the public space of gaslight in order to extend her life. Gervaise mimics the prostitutes who flit from gaslight to gaslight, as they:

> [E]merge from the shadows with the uncertain slowness of a ghost; they'd pass into the sudden light of a lamp-post, where their wan, mask-like features would loom into clear view, then they'd vanish once more, reclaimed by the darkness, the white edge of a petticoat swinging as they slipped back into the disturbing, enticing shadows of the pavement (p. 413).

There is a distinct otherworldly quality to the prostitutes' appearance when positioned and captured by the gaslight, Zola suggesting that it is the rapidity of their concealment and revelation - reminiscent of Lynda Nead's notion of 'rhythmic alternation'[324] - as they pass from light to darkness that is the most enticing aspect of

[323] Émile Zola, *L'Assomoir,* p. 411.
[324] Lynda Nead, *Victorian Babylon,* p. 102.

their image. Their mask-like faces, peering out from the shadows, further suggest the loss of individual agency under the gas lamps; they must perform a wholly new identity within the light.

Gervaise sees herself quite literally in a whole new light as she notices her shadow changing when moving between the pools of light and darkness: ‘When she came near a lamp-post the blurry shadow would concentrate and sharpen, becoming a huge, squat mass, so round it looked grotesque’ (p. 414). While she occupies the gas’s light, she is in turn astounded and shocked at her shadow, the image of which makes her realise exactly ‘how far she’d come down’ (p. 414). Gaslight objectifies Gervaise in its light, turning her into commodity which is ultimately shattered by the image of her engorged body following her own addiction to consumption.

Gaslight and Glass-Light: Interiorised Public Spaces in Zola’s Arcades

Within the Arcades, Benjamin’s cities in miniature, the concept of performance in an altered reality grew even stronger as vision was focused through glass and gas. The largest area of such display and commerce in nineteenth-century Paris was Les Halles, a large market place covered by glass and iron, and lit inside by gas.

Charles Marville, Interior of gas lamp-lined Les Halles, 1870.

From the above image it is easy to imagine how disorientating the vast structure of Les Halles could be. The pavilions were laid out like streets, with gas lamps lining them almost identically to how they did outside. Charles Rearick described the phenomena of the Les Halles Arcades at night in a way that suggests the blurred lines between theatricality and reality in such spaces: 'The market quarter was all the more enchanting because its liveliest hours were at night, when the lighted pavilions overflowing with sellers and buyers stood out like a bright stage show against the surrounding darkness.'[325] It began to be known, due to its close links with consumption as well as its vastness, as The Belly of Paris*,* which Emile Zola took for the title of his 1873 novel set largely in the markets.

As the protagonist Florent gazes down from a balcony towards the market, Zola describes how:

> The rain had made the wind drop; the blue, cloudless sky was still full of a thundery heat. Les Halles, washed by the downpour, spread out below him, the same colour as the sky, and like the sky, studded with the yellow stars of their gas burners.[326]

The only way to appreciate the vastness of the covered markets is from above, where they turn into a reflection of the sky itself, the map of artificiality again preceding the territory of reality. The nature of the sky's replication through glass and the stars with gaslight suggests a technological artifice akin to Baudelaire's vision of the fire-filled arcades. The sky is brought under control of man, as the glass roof of the market allows light to pass but nothing else - any natural threat to consumerism, such as bad weather, that may have befallen the outdoor markets has been eliminated. Comparing gas-jets to stars is a recurrent motif in Zola's works: *The Kill's* Saccard gazes over the Paris rooftops as each gas lamp emerges from the darkness like a star, Maxime and Reneé's vision of the street outside the Café Anglais, and in the battens of gas in the Theatre in *Nana*. Jane Brox argues: 'Under gaslight, the true stars started to fade away.'[327] She draws her argument from Robert Louis Stevenson's essay, 'A Plea for Gas Lamps', where Stevenson suggests:

> The city-folk had stars of their own; biddable, domesticated stars […] It is true that these were not so steady, nor yet so clear, as their originals; nor indeed

[325] Charles Rearick, *Paris Dreams, Paris Memories: The City and its Mystique* (Stanford: Stanford University Press, 2011) p. 212.
[326] Émile Zola, *The Belly of Paris,* trans. Brian Nelson (Oxord: Oxford University Press, 2007) p. 247. All further extracts from this work will be given in the main body of text unless otherwise stated in the footnotes.
[327] Jane Brox, *Brilliant,* p. 72.

> was their lustre so elegant as that of the best wax candles. But then the gas stars, being near at hand, were more practically efficacious than Jupiter himself.[328]

The constant use of cosmic metaphor suggests that the natural was slowly being replaced by the artificial. The whole notion of natural light itself is subverted by the gas-lamps, as the governors of this light controlled darkness and extended the day. The arcades were a fabrication of a life once lived in the open areas of the city streets, truly – as Benjamin suggests – a city in miniature.

Zola writes of Florent's first impression of the inside of the covered markets in a similar way: 'he imagined himself in some foreign town, with its various districts, suburbs, villages, walks and streets, squares and intersections, all suddenly placed under a huge roof one rainy day by the whim of some gigantic power' (p. 20). The market is distinctly other through its uncanny replication of city life. Florent views the space as 'foreign', something so alien that he cannot understand without contemplating whether a higher power formed the building - a potential satire on Baron Haussmann's power of renovation. The notion of bringing the outside in, or containing the natural within an observable space – as Les Halles does to the streets of Paris – is highly scientific, both in the sense of having the observable laboratory that Zola desired, yet also in recreating the technological processes of the gas lamp itself.

Les Halles is described in the novel as something that captures light, and then reproduces it artificially. Perceptions of light in Paris were changed by the advent of new technologies of light and vision, as the light of the sun came to be seen as less crucial to life when compared to the more controllable gas. Julien Lemer writes: 'I close the curtains on the sun. It is well and duly put to rest: let us speak no more of it. Henceforth, I shall know no other light than that of gas.'[329] Gaslight, and its associate nightlife, dictated the new reality of illuminated evening, which became preferable to pleasure-seeking subcultures. As Florent looks upon Les Halles, he sees that:

> They were blazing in the sunlight. A broad ray was shining through the covered avenue at the far end, cleaving the various markets with a portico of light, while fiery beams rained down on the roofs. The huge iron structure seemed blue and formed a dark silhouette against the background of the rising sun. High above a pane of glass caught the fire, drops of light trickled down the broad sloping zinc sheets to the guttering (p. 31).

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[328] Robert Louis Stevenson, 'A Plea for Gas Lamps' in Jane Brox, *Brilliant,* pp. 71-72.
[329] Julien Lemer, *Paris Au Gaz,* (Paris: 1861) p. 10 taken from Walter Benjamin, *The Arcades Project,* trans. Howard Eiland and Kevin McLaughlin (Cambridge, Massachusetts and London: Harvard University Press, 2002) p. 567.

Les Halles is not only the belly of Paris, but the light of the city as well. It amplifies sunlight in its glass panels, just as gas is manipulated into light through use of glass and iron. There are many layers of recreation in this depiction, as the outside is brought inside, and the light of the sun reproduced and refracted by the great glass panels of the covered markets. Brox suggests gaslight created life 'out of absence',[330] and it was out of this absence that the alternative reality of gas-lit night emerged; gaslight artificially recreated the sun, and in such enclosed spaces as the arcades and Les Halles, became a manipulable replacement for natural light. The Markets were the ultimate place of exchange and commerce, condensing the street into its most capitalist form and legitimising the false realities of consumerism by enclosing them within a dedicated space.

The effect that these ideas - the notion of the technological replacing the natural, and the outside being brought in - had on portrayals of self and autonomy focus the concept of individual desire under gaslight. Les Halles and the Arcades are components of a network *and* a micro-network within themselves; the markets are a source of light and part of the larger economic infrastructure, yet inside we may perceive that it is its *own* network. Zola's texts document how the self-fashioning individual began to exist within a pre-conceived infrastructure of desire and consumption, and be dictated by cultural and capitalist networks of fashion. The link between gaslight and streets, and the seamless transition from one gaslit space to another highlight how performance was necessary underneath the glow of the gas, further dissolving the reality of the highly altered gaslit street scenes. Suzanne Nash details how:

> Although the self-fashioning individual […] became a commonplace of nineteenth-century self-representation, no such totalising image seemed available for the *social theatre* within which that individual was expected to play out his role.[331]

Even though Nash declares that there is no perfect definition of the space that the self-fashioning individual of the nineteenth century inhabits, it is arguable that she suggests it herself as she presents us with the idea of the *social theatre*. The streets

[330] Jane Brox, *Brilliant,* p. 75.
[331] Suzanne Nash ed., 'Introduction' to *Home and its Dislocations in Nineteenth-Century France* (New York: State University of New York Press, 1993) p. 5.

and those people who populated them mimicked the fashions and actions of the stage, which were then reproduced back on the stage itself.

This, however, led to a feeling of alienation within such mass cultures, which is best exemplified through the evolution of the Comte Muffat's comprehension of the spaces of street and Arcade in *Nana* (1880). As he walks the boulevards and streets of Paris after visiting the theatre and having his passions enflamed by the sordidness of the backstage areas, his head is overwhelmed with sensations and thoughts of Nana:

> The ideas and beliefs of the last forty years were being drowned in a flood of new life. While he was walking along the boulevards, the rumble of the last carriages deafened him with the name of Nana: the gas-lamps set naked flesh dancing before his eyes – the naked flesh of Nana's lithe arms and white shoulders.[332]

Muffat is at the same time enlivened and repressed by the influence of the gaslights. Each passing lamp sets before his eyes the image of his desires, the phenomena of the boulevards suggesting satiation yet ultimately forcing him to repress sexually-charged behaviour in this place of absolute visibility. He becomes indoctrinated into the network of gaslight and vision, overwhelmed by sensation as he relinquishes the values and beliefs he held for the first forty years of his life. His individuality is being erased, as he finds himself a component of a larger, uncontrollable network of desire and consumption.

Nana sleeps with Muffatt, but 'without pleasure', affecting the way he inhabits the gas-lit space. Muffat's entrapment within a society obsessed with desire and consumption leaves him commodified and discarded. As he strolls through the Passages des Panoramas, light reflects his discontent:

> Under the glass panes, white with reflected light, the passage was brilliantly illuminated. A stream of light emanated from white globes, red lanterns, blue transparencies, lines of gas-jets, and gigantic watches and fans outlined in flame, all burning in the open; and the motley window displays, the gold ornaments of the jewellers, the crystal jars of the confectioners, the light-coloured silks of the milliners, glittered in the glare of the reflectors behind the clear plate-glass windows; while among the brightly coloured array of shop signs a huge crimson glove in the distance looked like a bleeding hand which had been severed from an arm and fastened to a yellow cuff.[333]

Instead of artificial light communicating lustful desires to him as it did on the Boulevard, within the Passage des Panoramas they merely suggest to him the *things*

[332] Émile Zola, *Nana,* trans. George Holden (London: Penguin Books, 1972) p. 171. All further extracts from this work will be given in the main body of text unless otherwise stated in the footnotes.
[333] Émile Zola, *Nana,* p. 209.

on display in shop windows. The commodities are now perceived as objects, rather than *signs* or promises of self-fulfilment. The notion of exchange, such a key concept in consumer culture, is mocked by the gas's highlighting of the 'huge crimson glove'. The glove, looking like a severed and bleeding hand, satirises the nature of capitalism; the last point of economical exchange, the single hand severed from the body suggests mindless and one-sided consumerism. There are also highly biblical undertones to Zola's depiction of the glove, in a possible reference to Matthew 5:30: 'And if your right hand causes you to stumble, cut it off and throw it away.'[334] The detached glove represents the allure of sin and the satisfaction of lustful desires. Muffat is similarly detached from himself now, as the enlivening and subsequent repression of desire he suffered during his gas-lit street experience is replaced by sterile emptiness. The gas lamps in this scene turn him into a commodified object, surrounding him with light as 'passers-by elbowed him at every turn, and gazed inquisitively at his silent face, which looked ghastly and pale in the gaslight' (p. 209). He is detached from their society, anonymised in the flood of the crowd, the gaslight highlighting his languid face and acting as a symbol of the power of networked vision in developing mass culture.

There is a similar portrayal of the claustrophobia of the Arcades in Zola's *Thérèse Raquin* (1867). The interiorisation of gaslights into one of the oldest arcades in the city, the Passages des Pont-Neuf, highlights the dinginess and squalor of such a place, as opposed to the new and glittering Passages des Panoramas:

> In the evening, the arcade is lit by three gaslights enclosed in heavy, square lanterns. These hang down from the glass roof, on which they cast patches of yellowish light, spreading pale circles of luminescence around them that shimmer and appear to vanish from time to time. The passageway looks as though it might really be a hiding place for cutthroats; great shadows spread across the paving and damp draughts blow in from the streets; it has the appearance of an underground gallery dimly lit by three funerary lanterns.[335]

David Lawrence Pike suggests that Zola's setting of the Passages des Pont-Neuf was because 'he wanted the sense of Paris as a fetid backwater, and the boulevards were still glamourous in 1867'.[336] The profusion of glass and iron ceilings created an

[334] Holy Bible: New International Version, Matthew 5:30, from https://www.biblegateway.com/passage/?search=Matthew+5:30&version=NIV [accessed on 22/9/15]
[335] Émile Zola, *Thérèse Raquin* trans. Robin Russ (London: Penguin Books, 2004) p. 10. All further references will be given in main body of text unless otherwise footnoted
[336] David Lawrence Pike, *Metropolis on the Styx: The Underworlds of Modern Urban Culture,* 1800-2001 (New York: Cornell University Press, 2007) p. 283.

unnervingly liminal space, and the replacement of the sun with the 'funerary' glass lanterns suggests potential inferences of an underground burial vault.

Thérèse is portrayed in a way that imagines her as a kind of lamp, which emphasises both how she is constricted within a network, yet also suggests a very limited autonomy. Zola describes the emotion visible in her face: 'It was as though her face had been lit from inside and flames were leaping from her flesh. And around her, burning blood and taut nerves released hot waves of passion, a penetrating, acrid fever in the air' (p. 35). Whereas previously, Thérèse was subjected to the male gaze of her lover Laurent, her passion disturbs the matrixial gaze relationship as she now emits light, affecting the way that Laurent sees her. Mario Maurin suggests that 'possession by sight serves as an intermediary stage' to erotic desire in the Arcades.[337] Now the light shines from Thérèse, disturbing Laurent's possession, and she releases an acrid air, similar to the multisensory attributes of gaslight itself. Symbolically, gaslight again displays how the individual, in this case Thérèse, may be affected by existing within a consumerist infrastructure. By reflecting the light back, Thérèse achieves a limited sense of autonomy within the constrictive network of vision. Within the enclosed space of the arcades, the erotic vision that pervades the desire-fuelled streets of Paris is transmuted into a gaze that may 'penetrate'.

Within interiorized spaces, gaslight may be read as reflecting its own traits and symbolism onto its surroundings and occupants, while also providing a much more focused image of the psychological and phenomenological concepts of gaslit streets. The Arcades may be considered as an example of Edward Soja's *thirdspace,* which he defines as a 'creative recombination and extension [of] a firstspace perspective that is focused on the "real" material world and a secondspace perspective that interprets this reality through "imagined" representations of spatiality'.[338] Definitions of reality became increasingly liminal within the Arcades, as they paradoxically combined an idealized image of how consumerism should work, with a highly unreal space that suggested both freedom of agency in its transparent panes of glass, yet also constriction and subservience through its replication of the streets outside. Interiorized gaslight becomes a symbol of both the constraints on the individual within a capitalist society, and a reflection of the invasiveness of the culture. On the gas-lit streets and

[337] Mario Maurin, 'Zola's Labyrinth' in *Yale French Studies, No. 42* (1969) p. 93.
[338] Edward W. Soja, *Thirdspace: Journeys to Los Angeles and other Real-Imagined Places* (Massacheusetts: Blackwell Publishing, 1996) p. 6.

public spaces of the new cities, passions were more obviously both enflamed and repressed. Wolfgang Schivelbusch states: 'lighting up the night with gas stirred people's feelings because it represented a triumph over the natural order, achieved without the lifeless hardness of electric light.'[339] Gaslight spoke of possibility on the streets, emboldening consumer desires and painting the world in a golden hue, yet at the same time holding its public in a state of frustrated repression, as there were more eyes in public by which one could be observed. It was isolating in its collectiveness. Within such matrixes, autonomy and agency were held up to the light of mass culture, as people found a false illusion of individuality within gaslit spaces.

[339] Wolfgang Schivelbusch, *Disenchanted Night,* p. 153.

3.3 The Theatre: Gaslight's Stage

Gaslight changed the way theatres operated, as they became lighting laboratories for the new form of illumination. Theatres were some of the first interior spaces to be completely illuminated by gas. The Olympic Theatre in London introduced gaslight in 1815, while in 1822, the Paris Opera House staged its first fully gas-lit performance, the appropriately named Nicolo Isouard opera, *Aladdin: The Marvellous Lamp.* A.J.J. Deshayes commented on the effects of gaslit performance in 1822:

> [T]his lighting is perfect for scenic effect. By means of gas, it would become possible to create a truly magical graduation of luminescence and one would not be obliged to commit glaring implausibilities when the action requires a change from daylight to night.[340]

One of the most obvious benefits of the new light source was the control one had over the variable efficacy of its light; by dimming or raising the lights stagehands could create different atmospheres on stage. As Jane Brox asserts: 'Not only had the candle-snuffer with his interruptions become a thing of the past, but light could now be dimmed and heightened with ease, which allowed for more sophisticated lighting effects.'[341] On the streets, Gas created an unreal environment – one that glistened with allure and potential – but on the stage it provided an illusion of realism. This further emphasised the *unreality,* or alternative reality, that gas wrought. The stage replicated the street in order to achieve a semblance of realism, yet by copying the street, it was only copying the effects of gas-lit night. It is reminiscent of Foucault's Third Principle of the Heterotopia, an idea that suggests such places are 'capable of juxtaposing in a single real place several spaces, several sites that are in themselves incompatible'.[342] The Theatre brought together many diverse sites of interaction, Foucault arguing that it 'brings onto the rectangle of the stage, one after the other, a whole series of places that are foreign to one another'.[343] Foucault's idea explicitly focuses on the stage, yet such an idea may easily be applied to the other *spaces* of the theatre. It was a place that brought together spaces of obvious performance and

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[340] A.J.J. Deshayes, 'The Dramatic Potential of Gaslight, 1822' in *Idées générales sur l'Academie de Musique* (Paris: Mougie, 1822) p. 35 taken from Donald Roy and Victor Emeljanow, eds. *Romantic and Revolutionary Theatre: 1789-1860* (Cambridge: Cambridge University Press, 2003)
[341] Jane Brox, *Brilliant,* p. 74.
[342] Michel Foucault, 'Of Other Spaces: Utopias and Heterotopias', trans. Jay Miskowiec from *Architecture/ Mouvement/ Continuité* (October 1984) p. 6, from http://web.mit.edu/allanmc/www/foucault1.pdf [accessed on 30/1/16]
[343] Michel Foucault, 'Of Other Spaces: Utopias and Heterotopias', p. 6.

display such as the stage, with areas of a much more public kind of display, as well as – especially in Zola – spaces which offered an image of the creation of Foucault's 'foreign' space.

Reactions to gas lighting within the theatre were divisive; some praised its effects on the stage, yet some lamented the overwhelming sensations of its light and atmosphere in the auditorium. Terence Rees encapsulates this idea:

> Observers found themselves torn between horror at its glare and pleasure at the brilliant effect. Sometimes it was noted that gaslights were beneficial to the audience's complexions, and sometimes they were blamed for shedding harsh light.[344]

This may have just been a reaction to what theatregoers were accustomed to; the overwhelming nature of gas's light would be a stark contrast to the light of the chandeliers and oil-lamps that preceded gas's adoption in theatres. Rees explains that 'one reason for the persistence of objections to 'too much light' was that it was truly a destroyer of visual effect'.[345] Gaslight was stifling to most of the senses in more enclosed and densely populated interior spaces; it destroyed colour, and created an atmosphere of stuffiness.

Historian F.W.J. Hemmings also portrays the claustrophobic, stifling atmosphere in the theatre following gas's introduction to the stage and auditorium:

> An evening at the theatre, however enthralling, could never have counted as a comfortable experience. The stuffiness of the atmosphere in the auditorium had been bad enough when the interior was lit by oil-lamps; when gas-lighting was introduced in the 1820s the heat could become, especially in summer, a positive torment.[346]

Hemmings's description is reminiscent of Wilkie Collins's account of his experiences in 'The Air and the Audience,' where he describes the 'poisonous' atmosphere of gas (See pp. 105-106). Hemmings also draws attention to Théophile Gautier and Émile Zola's description of the theatre as 'barbarous', quoting Zola as saying: 'I have never felt more strongly how much we are still in the age of barbarism, as far as the pleasure of going to the theatre is concerned.'[347]

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[344] Terence Rees, *Theatre Lighting in the Age of Gas,* p. 109.
[345] Terence Rees, *Theatre Lighting in the Age of Gas,* p. 189.
[346] F.W.J. Hemmings, *The Theatre Industry in Nineteenth Century France* (Cambridge: Cambridge University Press, 1993) p. 40.
[347] F.W.J. Hemmings, *The Theatre Industry in Nineteenth Century France,* p. 40.

David Baguely describes second-empire French theatre as an arena of 'unadulterated permissiveness, pleasure, and display, where all distinctions and signs of distinction were effaced to form a parodic society given over to the great leveller: sex'.[348] The multiplication of vision, and the visual desires that were played out both on stage and between the audience, made the theatre a cauldron of desire. It became the 'fashionable place to see and be seen'.[349] Wealthier theatre-goers paid more to gain a visual vantage point: Hemmings describes how many would purchase the stage boxes to the side of the stage, which provided a poor view of the theatrical action, but an excellent vantage point from which to survey the audience.[350] They enacted a class and wealth-based *oligoptic* system, as they gained visual power over the rest of the audience through their spatial positioning, a physical embodiment of their social standing and wealth. Otter quotes architect T. Roger Smith's summary of the audience's visual needs: 'the audience should see each other, so as to allow all who wish it an opportunity for personal display, and for scrutinising the appearance of others.'[351] The class-based system of vision within the theatre encouraged the act of spectatorship, as the acts of seeing and being seen became an increasingly crucial part of social interaction. The theatre influenced desire and consumerism through its engagement with a panoply of visual stimuli; from the visions on stage, to the images of the audience, there was an intricate web of gaze relationships active within the theatre created by the improved vision and heady atmosphere of gaslight.

Zola's Theatre: Staged Spaces

In Zola's introduction to the theatre in *Nana,* he outlines the confusion of the place and the visual effect that gaslight has on the scene and the audience. The narrative viewpoint shifts from outside to inside the theatre in the first chapter, as gaslight illuminates almost all of the spaces. He depicts gaslight as garishly beautifying its surroundings, while also exposing the artificiality beneath such aesthetic sheen:

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[348] David Baguely, *Napoleon III and his regime: An Extravaganza* (Louisiana: Louisiana State University Press, 2000) p. 307.
[349] 'A History of the Night at the Theatre' from http://www.vam.ac.uk/content/articles/a/a-history-of-a-night-at-the-theatre/ [accessed on 24/9/15]
[350] F.W.J. Hemmings, *The Theatre Industry in Nineteenth Century France,* p. 33.
[351] T. Roger Smith, *Acoustics in Relation to Architecture and Building* (London: Virtue, 1878) p. 115 in Chris Otter, *The Victorian Eye,* p. 74.

> Up above in the gallery, around the rotunda of the ceiling, on which naked women and children were flying about in a sky turned green by the gas, shouts and laughter emerged from a continuous din of voices, and rows of heads in caps and bonnets could be seen under the wide bays framed in gold.[352]

The theatre has a surface image of luxuriousness and grandeur, as emphasised by the gas, yet when looking closer, the artifice is evident. The 'wide bays framed in gold' offer an image of artificiality, as luxury merely frames the scene, without constructing it. On the ceiling, paintings of naked women and children, themselves suggestive of fertility and reproduction, inhabit a sky turned green by gas, a side effect of the invasive yellowness of the burning lights. The image suggests a sullying of innocence, as a once pure blue sky is turned the colour of jealousy and mouldering passion, and links gaslight with associations of decadence and decay.

The narrative shortly switches to outside the theatre, where we witness gas-lit street scenes become dioramas of night, social spaces in which the light's inhabitants position themselves to cultivate their own image or soak in others' under the play of the gas lamps. Describing the street outside of the Théâtre des Variétés, Zola creates a scene that blends artifice and reality:

> On the pavement outside, the row of gas-jets blazing along the cornice of the theatre cast a patch of brilliant light. Two small trees stood out sharply, a crude green colour, and a column shone so white, so brightly lit that you could read the notices on it at a distance, as if in broad daylight, while the dense night of the boulevard beyond was dotted with lights above the vague mass of an ever-moving crowd. Many men were not entering the theatre straight away, but staying outside to chat while finishing their cigars under the line of gas-jets, which gave their faces a livid pallor and silhouetted their short black shadows on the asphalt (p. 23).

The spectacle of the theatre is transplanted from the stage to the street in front of the building itself. Gaslight makes the building's façade, and its occupants, the attraction to the eye, as people position themselves in a space where they can both see and be seen. It is a distinctly social space, as the men gather to smoke their cigars, yet one made lurid by the nature of gas's light. Gas taints the natural, making the trees a 'crude green'. The men's faces are also described as having a 'livid pallor,' a troubling description as the light makes their appearance almost corpselike. The Oxford edition's translation creates a similar tone, as 'in the glare of the gas-jets their

[352] Émile Zola, *Nana,* trans. George Holden (London: Penguin Books, 1972) p. 19. All further extracts from this work will be given in the main body of text unless otherwise stated in the footnotes.

faces were ghastly pale'.[353] While providing the men with space in which to seize the new nocturnal life afforded to them, providing them with life out of the absence of light, Zola presents us with the image of lifelessness and ghastliness under the glare of gas's light.

This idea is continued in Zola's further exposition of the theatre at show time:

> By now the house was resplendent. Tall jets of gas lit the great crystal chandelier with a blaze of pink and yellow flames, which rained down a stream of light from gallery to pit. The scarlet velvets of the seats were shot with tints of lake, while all the gilding shone brightly, the pale green decorations softening its brilliance beneath the crude paintings on the ceiling. The footlights were turned up, and with a sudden flood of light set fire to the curtain, whose heavy crimson drapery had all the richness of a fairy-tale palace, and contrasted sharply with the shabbiness of the proscenium arch, where cracks showed the plaster under the gilding (pp. 26-27).

Again, the notion of gas creating a 'fairy-tale' like space is emphasised. Within this passage, there is a growing discord between gaslight's enflamed aura and reality. The artificiality of its light creates a space where material is made luxuriously sensuous; its glare imbues materials with depth and colour, yet also exposes cracks that appear under theatrical falseness. The mass of gilt edges present within the theatre, and the process of gilding itself, suggest an artificial surface to a hidden reality, which is in itself a ripe metaphor for the aesthetics of consumer culture and the developing theatricality of society. Brian Nelson suggests that depictions of theatres, themselves an 'emblematic feature of contemporary life', are used as 'giant symbols of the society of his [Zola's] day'.[354] The theatre acts metonymically as a symbol of the culture that was engulfing the city.

When Nana appears naked on stage as Venus, the use of gaslight shifts to focus on the unreality of the scene, and the commodification of the individual. They are employed in the background of the scene, where 'Vulcan's forge glowed like a setting sun' (p. 44). The scenery behind the naked Nana is described as 'glittering like newly minted coins' (p. 44), an analogy reminiscent of Saccard's comparison of the pools of gaslight to heaps of gold coins in *The Kill.* The gas footlights of the stage expose what must be repressed under the gas of the streets. They sexualise Nana, exposing her to desire as they illuminate the most intimate and personal details of her body: 'And when Nana raised her arms, the golden hairs in her arm-pits could be seen

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[353] Émile Zola, *Nana,* trans. Douglas Parmeé (Oxford: Oxford University Press, 2009) p. 5.
[354] Brian Nelson, 'Zola and the Nineteenth Century' in *The Cambridge Companion to Emile Zola* ed. B. Nelson (Cambridge: Cambridge University Press, 2007) p. 4.

in the glare of the footlights' (p. 44). Nana reverses the possession through vision that was promoted by the gaslights; she appropriates her visual exposition into something that she can manipulate for her own ends, as she opens the 'gates of the unknown world of desire', and smiles the 'deadly smile of a man-eater' (p. 45). Her image in the gaslight confuses the visually-enforced repression of desire that consumed the audience prior to the image of her on stage. There is no more laughter, and the men's faces were 'tense and serious' (p. 44). The space of the stage becomes an impenetrable layer of gas-lit alternative reality. It relates directly to the repression Muffat feels when walking the streets; the gas photographs Nana in his desires, before the gaslights of the streets re-stage the image of her naked flesh, the highly visual gaslit arena causing this desire to be repressed under the threat of being observed. Through Nana's exposure on stage, she reclaims her own image as one of a visually accessible desire, reversing the dynamics of the erotically-charged gaze through its bluntness.

After the overwhelming visual sensation of the naked Nana swathed in the heady light of the gas, the people of the auditorium are caught up in stifling erotic passion: the house was 'seized by a fit of giddiness in its fatigue and excitement, and possessed by those drowsy midnight urges which fumble between the sheets' (p. 46). Nana's image directly stimulates the audience's sexual desire, which the sultry aura of gaslight only adds to. When energised with light and life, the auditorium traps the audience within its atmosphere:

> The audience were suffocating, their very hair growing heavy on their perspiring heads. In the three hours they had been there, their breath had filled the atmosphere with a hot human scent. In the flickering glare of the gaslight, the cloud of dust in the air had grown denser as it hung motionless beneath the chandelier (p. 46).

The theatre is depicted as a sensually overwhelming place. The air is dense and heavy within the auditorium, the claustrophobia reflecting the caged sexual desires of the audience. Alison M.K. Walls suggests that 'the theatre provides [Nana], as it did in reality for many, with the perfect display cabinet'.[355] Indeed, when the lamps of the auditorium are switched off, it is only then that it 'fell into a heavy sleep, while a musty, dusty smell began to rise into the air' (p. 47). The auditorium of the theatre could almost be envisioned as a gas lamp itself; it finds fuel for its vibrancy from

[355] Alison M.K. Walls, *The Sentiment of Spending,* p. 28.

external sources, as the leisure classes enliven its interior and create an infinitely visual space. Indeed, later in the text, Muffat witnesses an unoccupied theatre auditorium devoid of the passions of nighttime in the 'pale November sunlight'. As he glances through the open doors of the green room, he notices 'the utter dilapidation of the vast chamber, which looked shamefully stained and worn in broad daylight' (p. 294). The auditorium lacks the fuel required to power its spectacle in sunlit day.

Nana herself becomes part of the capitalist network; she is captured by gaslight, manipulated by it and ultimately burnt out within its light. Zola describes how her 'success was sudden and decisive, a swift rise to gallant fame, in the garish light of lunatic extravagance and the wasteful follies of beauty' (p. 311). This creates further links between the extravagant and wasteful nature of Second Empire bourgeoisie culture, one that isolates the individual through anonymisation within a mass culture, and the luridness of the 'garish light' that frames Nana. A comparison may be drawn between the instantaneousness of Nana's success, the hollow impersonality of it, and the artificial attributes of gas's light. On stage, Nana's image is formed by gas:

> Beyond the dazzling arc formed by the footlights the dark auditorium looked as if it were full of a reddish smoke, and against this neutral background to which the rows of faces lent a vague pallor, Nana stood out white and gigantic, blotting out all the boxes from the balcony to the flies (p. 163).

The light of the stage outlines Nana. As it casts a pall over the audience and emphasises Nana's pale skin, she becomes as synonymous with the notion of spectacle and display as gaslights are. Later, Zola describes her re-emergence in Paris as 'the period of her life when Nana lit up Paris with redoubled splendour' (p. 409), writing that 'her house had become a sort of glowing forge, where her continual desires burned fiercely and the slightest breath from her lips changed gold into fine ashes which the wind swept away every hour' (p. 409). She is constantly surrounded by light, the spectacle of her on stage replicated by the representation of her through gaslights elsewhere. Tellingly, when she is near death following a bout of smallpox, nothing more than 'a heap of pus and blood, a shovelful of putrid flesh' (p. 469), she is determinedly *not* lit by gas, Rose deciding that 'the lamp did not look right, and what was needed was a candle' (pp. 469-470). It is reminiscent of Gervaise's relationship with the candle in *L'Assomoir;* both women are dislocated from the capitalist networks that ultimately commodify them, their association with the candle

an indicator of the frailty of their independent agency and autonomy. The candle's light exposes more honestly than the gas lamps', which had a tendency to enliven the artificial. Nana is ultimately destroyed by her commodification in such a culture of absolute vision and desire, as reflected by her alignment with the independent values and associations of candlelight upon her death.

The cyclical influence of capitalism from the streets to the theatre stage encouraged consumerist desire. It was a self-fulfilling promise of individual improvement that ensnared the wealthier middle class and bourgeoisie into an endless procession of desire. Rosalind Williams summarises the mobility of desire in such a space: 'The joys sought by bourgeois are artificial ones that would never be missed, but once incited, keep driving them on to more desires and more consumption, which does not satisfy but only renews desire.'[356] The symbolic value of gaslight mirrors this cycle. It is controlled fire, an industrialised and manipulable form of flame-light; the gas is pumped into a brazier by vast, sprawling networks of pipes and gasworks, before it is lit inside the lamp and either contained within plate or globed glass or left to blaze openly. This image itself offers ideas of restriction, of artificiality, and of the containment of a natural force into something controllable. We may see another representation of this repression and artificiality if we delve further into the portrayal of the underworld of the Théâtre des Variétés in *Nana.*

The backstage area is a space where *signs* of consumer culture are created before being disseminated on stage. The theatre is not necessarily *selling* anything directly to their audiences, but it is providing them with the image that their self-fulfillment is geared towards. Consider the reaction of the crowd to Nana's nakedness; 'their mouths were prickly and parched' (p. 44) – her image on stage stirs desire, it makes the men of the audience thirsty for Nana, and relates directly to Bordenave's claims that his theatre is a 'brothel' (p. 48). Nana appealed to women in a similarly consumerist manner, yet in a less overtly sexual way. Alison M.K. Walls describes Nana as a 'consumerist role model', further suggesting that her appearances on stage, and the appearance of her pictures in shop windows, are for 'noble ladies to imitate'.[357] Nana is the ultimate commodified individual, she drives desire in both

[356] Rosalind Williams, *Dream Worlds: Mass Consumption in Late Nineteenth Century France* (California: University of California Press, 1991) p. 54
[357] Alison M.K. Walls, *The Sentiment of Spending,* p. 54.

sexes – men (and occasionally women) want to sleep with her, and women want to be her.

Zola describes the procession into the belly of the theatre as a journey into a completely foreign land, a place where the signs and signifiers of early-modern, Second Empire culture are created, reproduced, and dispersed within the phantasmagorical gaslight. Describing the backstage area, Zola details how:

> Along the yellow wall, which was brightly lit by a gas-lamp just out of sight, there passed a succession of rapidly moving figures – men in costume and half-naked women wrapped in shawls, in other words, all the walkers-on in the second act, who would shortly make their appearance as carnival masks in the ball at the Boule Noire' (p. 137).

The *image* of consumer desire that the theatre promotes is quite literally stripped back and desensualised behind the scenes of the theatre. The figures move 'rapidly' in various states of undress, themselves becoming 'carnival masks' as performance itself is performed. We may understand this as an early indicator of a Baudrillardian reality that focuses on the power of the *sign*. Baudrillard describes the hyperreal consumer culture of the twentieth century by stating 'it is no longer a question of imitation, nor of reduplication, nor even of parody. It is rather a question of substituting signs of the real for the real itself'.[358] The wings and backstage areas of the theatre are the origin of the reflected consumer image inherent to Second Empire visual culture. Zola acknowledges that the people who populate the wings are all 'walkers-on in the second act' who would soon be *masked*, a description that stands out as a potential replication of the blurred, performative consumer reality of the 'Second Empire' populace of Paris. Within the confines of the backstage areas the image of desire promoted on the stage and the *origins* of such image are blurred, forcing erotic desire and the artificially manipulated world of consumer desire to coalesce.

As Comte Muffat progresses further within the gaslit backstage underworld of the theatre, he begins to feel uneasy at the lack of any solid reality:

> The fairly steep slope had taken him by surprise, and some of his uneasiness was due to his awareness that he was standing on a hollow floor. Through the open sockets gas could be seen burning down below and human voices and cellar draughts coming up from the gloomy depths bore witness to a whole subterranean existence (pp. 146-147).

[358] Jean Baudrillard, *Simulacra and Simulation,* p. 64.

The depths of the theatre are Muffat's hell, a place where images of desire and spectacle are exposed. It is the foundry of consumer-led desire. His enthusiasm for strolling the streets, for seeing 'the naked flesh of Nana's lithe arms and white shoulders' (p. 171) in every street lamp is the resulting high after immersing himself in such a claustrophobic and sultry environment. The sexual air of the theatre overpowers him:

> The Comte Muffat was beginning to perspire and had just taken his hat off. What inconvenienced him the most was the heavy, dense, over-heated air of the place, with its overpowering smell, a smell peculiar to the wings of a theatre, and combining the different scents of gas, of the glue used to make the scenery, of dirty nooks and crannies, and of the chorus-girls' dirty underwear (p. 147).

The heady, promiscuous description of the stifling nature of the theatre's wings is more akin to a brothel. Muffat's experience sickens him yet also enlivens his desires. As he becomes more aware of the artificial heart of the theatre, he witnesses visions of flesh that lurk beneath the performative artificial aesthetic. Zola suggests soon after this that 'The world of the theatre was re-creating the real world in a sort of solemn farce under the hot glare of the gas' (p. 151). Zola's explicit link between the recreations of reality in the distinctly artificial environment offers an image of the theatre as a mirror that reflects culture's desires. It is not reality that is reproduced, however, rather another layer of imitation. It again exemplifies Baudrillard's notion of 'the hysteria of production and reproduction of the real'. He suggests a model which may be read in the reflexive production of reality that exists between the public spaces of Paris and the interior space of the theatre: 'What society seeks through production, and overproduction, is the restoration of the real which escapes it.'[359] In the wake of gas-lit night, a new order of life was created, different from both day and night; a kind of third order. It was a world where any firm nature of reality was constantly destabilised.

Notions of the third order gas created are encouraged by Muffat's astonishment at the vision of the gaslights being raised over the stage during a changing of scene:

> A batten had just been lowered, and this row of lights, hanging in its iron mesh, illuminated the stage with a wide beam of light. Muffat, who had never yet been behind the scenes at a theatre, was even more astonished than the

[359] Jean Baudrillard, *Simulacra and Simuation,* p. 67.

> rest, filled with a feeling of malaise, a vague repugnance mingled with fear. He looked up into the flies, where more battens, on which the gas-jets had been turned down, gleamed like galaxies of little bluish stars amid the chaos of the upper flies and wires of all thicknesses, painters' cradles, and backcloths spread out in space, like huge sheets hung out to dry (p. 146).

Depictions of interior and exterior spaces intermingle in this description, as comparisons are drawn between gaslight and starlight, suggesting both the interconnectedness and fairy-tale like aspects of the lamps. The lights of the stage expose the universe of the theatre as being nothing but 'chaos' within which any sense of reality is blurred and subsequently recreated. The cosmic depiction of the theatre emphasizes how small a part of the consumer universe Muffat is, and how helplessly lost he is as part of its faceless mass. The comparisons made between gaslight and starlight may also be related to the emergence of light pollution, or sky glow as it was known in the nineteenth century. Real stars gradually disappeared from the night's sky as the glow from cities' lights blinded their citizens' view of the stars above. Jane Brox draws attention to Vincent van Gogh's tendency to overcompensate on stars in his paintings that featured gaslight.[360] Gaslight not only invaded the city, but also its night sky and artistic representations of it, blurring reality yet again, and creating the oppressive atmosphere Muffat feels under the theatre battens' light.

Zola describes the feeling that overwhelms Muffat in a manner that suggests his emotions are symbolically connected to the gaslights: 'He felt the thick dressing-room carpet yielding under foot, while the gas-jets burning by the dressing-table and the cheval-glass seemed to be shooting hissing flames around his temples' (p. 149). Gazing into the mirror, his reflection is enclosed by the boundary-light of the two gas lamps that flank it. His appearance reflects the passions that are enflamed by his entrance into the ladies' dressing room. Muffat's spatial positioning intimates that his mind has become one with the networked fire of the gas lamp. The synecdochal focusing down of the gas lighting network into the flames of the two lamps that frame Muffat's face connotes his assimilation into the public network of desire. He is isolated as his individuality is replaced by the desires of the masses. It is after he leaves the theatre to walk the Prince and Nana out onto the streets that he is left 'feeling as if his head were on fire' (p. 171), and completely infatuated with Nana, seeing signs of her everywhere on the brightly illuminated boulevards. His position in

[360] Charles Whitney quoted in Jane Brox, *Brilliant,* p. 283.

front of the mirror also suggests an unconscious awareness of his own dislocation. Foucault's suggests the mirror is a kind of heterotopia; a 'placeless place' as he terms it due to its ability to make the vision of oneself in it 'at once absolutely real, connected with all the space that surrounds it, and absolutely unreal, since in order to be perceived it has to pass through this virtual point which is over there'.[361] Muffat is at the deepest level of the consumerist image of desire at this stage, the 'hissing flames' around the mirror suggesting a dislocation of his self and agency within the interconnected cultures of capitalism and its related erotic desires. Similar notions of engorged desires and passions, and the role of gaslight as a creator of such life, may be read through an examination of the Theatre's Concierge's Lodge: 'This lodge, situated between the actors' staircase and that of the management, was shut in on both sides, right and left, by large glass partitions, and resembled a huge transparent lantern, in which two gas jets were blazing away' (pp. 143-44). Spatially, the gas lamps are arranged in a similar manner to Muffat's appearance in the mirror, suggesting a further link between this individual space and its ensconced role within the larger network. Its liminal position, at the heart of the theatre yet in between the actors' space and that of the management, suggests constant unrest, as does the array of things within: 'Letters and newspapers were piled up in a set of pigeon-holes, and on the table bouquets of flowers lay waiting behind dirty plates and an old bodice, the button-holes of which the concierge was busy mending' (p. 144).

Zola draws attention to the undercurrent of consumer society, and the filth and squalor that underpins the construction of the garish images that influenced it in his treatment of the backstage areas. Muffat, gazing through an open spy-hole, witnesses a dressing room, completely empty, yet 'in the flaring gaslight all he could see was a chamber-pot forgotten among a heap of skirts on the floor. This sight was the last impression he took with him' (p. 166). Muffat leaves the theatre with his passions and desires enflamed, yet with a lingering awareness of the truth behind such performative stimulations. In the image of the gas-lit chamber pot, coated with old skirts, we can understand the satirical intent of Zola's depiction of the theatre as he emphasises the reality beneath the theatrical sheen of life in a modern consumerist city. Muffat's identity is erased until he becomes just another part of the consumer network; he believes he consumes Nana, when she in fact utilizes him for his money, becoming a

[361] Michel Foucault, 'Of Other Spaces: Utopias and Heterotopias', p. 4.

commodity who is then discarded to lose himself in images of gaslight and Nana. The theatre mimics what happens outside: what may be seen on stage is what is performed on the street, yet backstage is the reality underneath the artifice. Second Empire capitalist culture was founded on waste, and the deferral of desire into something materialistic and aesthetic.

These areas of the theatre were places where ‘All along the passages, glimpses of naked flesh, white skin, and pale underwear could be seen through chinks in doorways’ (p. 165). The image of Nana naked on stage may be seen as the ultimate product of the backstage of the theatre. Gaslight in the backstage scenes burns like the light of a hellish foundry, but on stage it exposes, beautifies, and commodifies. The stage reverses the visual principle that enforced both desire and repression on the streets as it invites the gaze towards it. On the stage the focus drawn to Nana causes her to attain a sense of power over her observers. They are put into an almost hypnotic trance by the image they witness before them. The backstage areas, with their constant references to bare skin, and the otherworldly nature of its light, were places that created this image, and subsequently, where the images that dominated and dictated consumer fashion and life were created - the base form and origin of the simulacra of the streets.

3.4 The Department Store: Gaslight's Dressing Room

In the increasingly modern cities of the nineteenth century, the department store symbolised the amalgam of performance, desire, consumption, and the phenomena of vision that constituted public life. It was a similar encapsulation of the capitalist processes to the Arcades, yet distinctly its own space due to the different interaction of public and private. If the style of the theatre spilled onto the streets, then the department store was the dressing room. Walter Benjamin describes the department store as 'the last promenade for the flâneur. There his desires were materialised'.[362] Gaslight enlivened the image of products within stores, and the act of purchasing allowed for a satiation of desire that was almost instant. Lynda Nead suggests that gas-lit stores offered a 'superabundance of illumination. In the shop-fronts gas lighting was more than functional, it was magical and transformed the experience of the city space into a mode of visual desire'.[363] The department store was a place completely designed for browsing, viewing and exchange. Nead's reference to the 'superabundance' of light creates an image of a highly artificial, yet enticing place. The department store, like the Arcades, was a city in miniature, and sampling the sights and feel of clothing or other goods made such places a paradise of flânerie.

Wolfgang Schivelbusch comments on how gas lighting affected the way that shops operated. Shops were previously 'little more than anterooms of the warehouses behind them',[364] but nineteenth-century department stores turned shopping into a tactilely interactive experience, where it was possible for consumers to explore, touch, and see the products:

> The more the streets could supply potential customers, the more the shops opened up to them. The display window, that began to develop as an independent part of the shop from the middle of the eighteenth century, was the scene of this interchange. While previously it had been little more than an ordinary window that permitted people to see in and out of the shop, it now became a glassed-in stage on which an advertising show was presented.[365]

The convergence of public and private spaces in the windows of department stores further enabled theatregoers to envision themselves as the stars of their own performance through its replication of stage-lighting, as well as the reflective glass. The shop window recreated the theatre in a further example of Foucault's

[362] Walter Benjamin, *The Arcades Project,* p. 895.
[363] Lynda Nead, *Victorian Babylon,* p. 87.
[364] Wolfgang Schivelbusch, *Disenchanted Night,* p. 143.
[365] Wolfgang Schivelbusch, *Disenchanted Night,* p. 146.

heterotopian space as a space that was 'simultaneously mythic and real', Rupinder Singh suggesting the space of the nineteenth-century department store 'easily locates itself' within Foucault's examples of heterotopian spaces.[366]

The department store was thought of as a woman's space, somewhere that could be strolled and perused in safety in comparison to the exterior streets. The stores aimed to seduce women with constant exhibition, and the possibility of easy satiation of desire. The *image* of the products was emphasised rather than their function; a definitive difference from old modes of commerce where products were hidden in a warehouse behind the anteroom of the shop, only to be recovered based on a customer's needs, not impulsive wants. The window displays were promises of self-improvement. The fantastical scene of illumination that spread outwards created an image of fantasy, and promoted the idea that an individual could improve themselves with the products within. New technologies of vision, such as gaslight and sheet-glass, helped to blur the boundary between indoor and outdoor, and ensure that visibility was maintained in a way that enticed shoppers inside and made them stay.

There was a cyclical nature to consumerism in Second Empire Paris, as the theatre, the consumer and the department store all influenced each other in terms of public desire. Mariana Valverde suggests that 'consumerism […] constructs our desire as limitless,' suggesting that erotic desire is 'historically constructed', and distorted by the advent of consumerism.[367] The interaction of desire between theatre, store and consumer aided the sublimation of sexual passion and eroticism into consumerist-driven desires that were more acceptable to enact and satisfy in such a visual society. Alison M.K. Walls suggests: 'One of the many anxieties surrounding the nineteenth-century department store centred on its lack of discretion. Combined as it was with its apparent capacity to indulge the senses, it was worryingly suggestive of sexual gratification.'[368] Gaslamps helped to enflame passions and overload senses with visual stimuli, before enticing the public into department stores under the glare of their yellow, artificial light. Phillipe Perrot suggests that 'the department store sought to seduce, satisfy and secure the confidence and loyalty of the many by

[366] Rupinder Singh, 'i shop therefore i am' in *Ctrl+Alt+Delete: Detroit in the Age of Obscelence,* ed. Rupinder Singh (Salt Lake City: Aardvark Publishers, 2008) p. 98.
[367] Mariana Valverde, *Sex, Power, and Pleasure* (Ontario: Women's Press, 1985) p. 152.
[368] Alison M.K. Walls, *The Sentiment of Spending*, p. 71.

proving its honesty and softening the too-obvious mercantile relationship'.[369] Gaslight enabled the stores to 'prove' their honesty through its glare, yet it was, paradoxically, a false idea of honesty. The light's very nature created scenes of artificiality, yet through adopting it into stores, owners cultivated similar atmospheres to other dominant gas-lit spaces of the nineteenth-century city. This created an illusion of trust through the seamlessness of collected gas-lit spaces of theatre, street and shop - even though the atmosphere was still largely artificial. The department store aimed to seduce, and appeal to its customers through a replication of the illuminatory imagery that was beginning to dominate the rest of the cityscape. Gaslight's illumination was a siren, singing its consumerist song to the passers-by on the street, further establishing gas's extended associations with repression and subsequent satisfaction of desire.

Gaslight's blurring of the boundaries of indoor and outdoor space added to the perceived safety of department stores at night, as well as their allure. By lighting the pavements of the boulevards with the light from shop windows, department stores extended the field of their seduction, as the exterior of the shops was bathed in the same light as the shop itself. Schivelbusch suggests that psychologically, this had a massive effect on the strollers of the Paris boulevards, and their attraction to the stores: 'Any artificially lit area out of doors is experienced as an interior because it is marked off from the surrounding darkness as if by walls, which run along the edges of the lit up area [suggesting that] shop lighting created an 'interior' space out of doors.'[370] Artificial lighting enabled the department store to expand its seduction onto the streets, and provide a seamless transition between the illumination of street and store. It was easier for an urban stroller to enter such a space, as the psychological and visual perceptions of such spaces would be distinctly liminal. As the gaslights lit goods inside, behaviours in front of stores became theatrical:

> The illuminated window as stage, the street as theatre and the passers-by as audience, this is the scene of big-city night-life. As the boulevard at night developed in the nineteenth century, it did in fact look like an interior out of doors.[371]

Gaslight colonised the evening, and made nighttime consumerism a much more distinct possibility than it was previously, as well as turning the act of shopping into

[369] Phillipe Perrot, *Fashioning the Bourgeoisie: A History of Clothing in the Nineteenth Century* (New Jersey: Princeton University Press, 1999) p. 60.
[370] Wolfgang Schivelbusch, *Disenchanted Night,* pp. 149-150.
[371] Wolfgang Schivelbusch, *Disenchanted Night,* p. 148.

both an attraction and a *performance.* Gas was at the centre of this new life of consumption, and at the heart of developing trends of display and spectacle. Peter N. Stearns identifies what he terms the 'explosion' of consumerism that emerged after 1850, which he suggests was largely because 'The apparatus of consumerism changed, as shops and wordy advertisements were increasingly replaced by new retail outlets and a still-more manipulative advertising style'.[372] The boom in consumerism Stearns defines ran parallel to the expansion of gas lighting, as the illumination became another new consumerist apparatus that was appropriated by shops and salespeople to manipulate the image of their products.

The department store is a place where reality is artificially manipulated; products are placed in parts of the store dependent on where they will be most visible, for example, or expensive commodities placed in main thoroughfares in order to maximise sales potential. Stores sought to convince their customers that these artificial spaces were honest and trustworthy, as Perrot suggested, even though their atmosphere was largely artificial. Even the behaviour of the staff was altered to secure customers, as 'everything was done to arouse desire and de-dramatise buying'.[373] A large number of books were published in the late nineteenth-century that dealt directly with shop dressing. J.H. Wilson Marriot's *Nearly Three Hundred Ways to Dress Show Windows* was perhaps the most exhaustive at over 200 pages, within which, Louisa Ioracci notes 'the arrangement is less concerned with a functional combination of goods than with their artistic composition'.[374] Goods were arranged both in shop windows and in the store itself to maximise visual stimulation. The artificial reality of the nineteenth-century department store may be considered to imitate the first three phases of Baudrillard's simulacra. The shop may be understood as the first phase of the image; 'the reflection of a profound reality,' as the store begins to mimic the city streets that surround it, which then moves into the second phase as it 'masks and denatures a profound reality' – its artificiality, and the fact that it mimics the artificial culture of the street, lending value to the notion that reality is denatured – until finally it 'masks the absence of a profound reality' as it equips the real with the garments it needs to disguise itself under the constantly-changing procession of desire and

[372] Peter N. Stearns, *Consumerism in World History: The Global Transformation of Desire* (New York: Routledge, 2006) p. 47.
[373] Phillipe Perrot, *Fashioning the Bourgeoisie: A History of Clothing in the Nineteenth Century,* p. 60.
[374] Louisa Iarocci 'The Art of Draping: Window Dressing' in *Visual Merchandising: The Image of Selling,* ed. Louisa Iarocci (Farnham: Ashgate Publishing, 2013) p. 144.

simulacra.[375] It further suggests Marx's notion of the commodity as an object that is outside of us. In a sense, the origin of the material objects within the department store is masked as manufacture is removed and hidden from the consumer process. Within the gas-lit space of the department store, the origin of reality is further dissolved by the colour-heightening, and dream-like hyperreality of the lamps, which resulted in a space that was both confusingly transient, yet seductively satisfying

Gaslight in Zola's *The Ladies' Paradise*

Émile Zola's *The Ladies' Paradise* (1883) establishes the function and operation of department store culture with highly suggestive acknowledgements to the role of gaslight. Zola emphasises the growing disparity between old and new modes of consumerism, and the effect it has on the individual, using the burgeoning network of gaslight as metaphor. One of the first images protagonist Denise receives of Paris is the gloriously lit Ladies' Paradise department store:

> With its series of perspectives, with the display on the ground floor and the plate-glass windows of the mezzanine floor, behind which could be seen all the intimate life of the various departments, the spectacle seemed to Denise to be endless.[376]

Within this image of the Ladies' Paradise we may witness the endlessness of consumer desire, and the loss of individual identity, exemplified through the repetition of spectacle in the plate-glass, gas-lit windows. It is a similar image to Mr. Robinson's desired shop window in Anthony Trollope's *The Struggles of Brown, Jones and Robinson:* 'Outside there should be glass, gas, gold and glare. Inside there should be the same, with plenty of brass, and if possible, a little wit. If those won't do, nothing will.'[377] The shop-windows provided the consumer a seamless transition from street to store. Robinson also states:

> Of all our materials now in general use, glass is the most brilliant, and yet the cheapest; the most graceful and yet the strongest. Though transparent it is impervious to wet. The eye travels through it but not the hailstorm. To the power of gas it afford no obstacle, but is as efficient a barrier against the casualties of the street as an iron shutter. To that which is ordinary, it lends a

[375] Jean Baudrillard, *Simulacra and Simulation,* p. 6.
[376] Émile Zola, *The Ladies' Paradise,* trans. Brian Nelson (Oxford: Oxford University Press, 2008) p. 4 All further extracts from this work will be given in the main body of text unless otherwise stated in the footnotes.
[377] Anthony Trollope, *The Struggles of Brown, Jones and Robinson* (London: Smith, Elder & Co., 1870) p. 35.

> grace; and to that which is graceful it gives a double lustre. Like a good advertisement, it multiplies your stock tenfold.[378]

Glass and gas are important colleagues of department store allure and illumination; in Mr. Robinson's shop the glass blocks the 'casualties of the street', while permitting the 'power of gas' to pass through. In Zola's description of the frontage of the Ladies' Paradise, we may witness the seductive effect of the mirrors on either side of the glassed-in shop window, as they 'reflect the dummies, multiplying them endlessly, seeming to fill the street with these beautiful women for sale with huge price tags where their heads should have been' (p. 6). This subverts the image and reflection of women gazing into the great glass windows. They are drawn towards the front of the shop, only to lose their senses to bargains, price tags visually replacing their heads in the reflections on the glass.

Depictions of gaslight aid this false reality, as the products within the Store are glorified and made beautiful by display techniques:

> The window displays had become indistinct also, and nothing could now be seen opposite but the snowy lace, the white of which was heightened by the frosted glass globes of a row of gas jets. Against this chapel-like background, the coats were bursting with energy; the great velvet overcoat trimmed with silver fox suggested the curved outline of a headless woman, running through the downpour to some festivity in the mysterious Parisian night (p. 28).

The Paradise seduces women senseless, the figure of the headless woman suggestive of unquestioning devotion to the culture of decadence and consumption; she loses her agency, and is shackled by the overwhelming panoply of sensations promised to her by the Paradise and the consumerist matrix. It is a similar image to the vision of the severed glove in *Nana*; in both instances, the processes of exchange are satirised through detachment as a suggestion of the one-sidedness of consumerism. Indeed, the headless woman relates back to the 'dummies' of the shop window, and their endless reflections. The products seem more alive than Denise does, the 'coats bursting with energy' suggestive of how dehumanised the customer was due to the idealisation of consumer desire into something bigger than the individual's needs.

Alison M.K. Walls suggests Zola's women fall victim to the 'sensual appeal of fantasised objects; they are unable to separate material objects, religion, or sex. The department store therefore, by deliberately combining all these elements, easily

[378] Anthony Trollope, *The Struggles of Brown, Jones and Robinson*, p. 37.

captures the female psyche'.[379] Zola likens the experience of a Department Store to women as something religious:

> The department store tends to replace the church. It marches to the religion of the cash desk, of beauty, of coquetry, and fashion. [Women] go there to pass the hours as they used to go to church: an occupation, a place of enthusiasm where they struggle between their passion for clothes and the thrift of their husbands.[380]

Through the intimacy of such ideas of sex, exchange, and religion, Zola's hyperbolic depiction of the effect of consumerism on women satirises the growing societies of commerce and capitalism in Second-Empire Paris. His misogynist depictions of the women's subservience to the department stores, and to the 'thrift of their husbands', create an image of alienation within growing networks of material culture.

Zola combines the concept of isolated alienation within an established infrastructure with networks of gaslighting to portray the disparity between the Ladies' Paradise and Denise's Uncle Baudu's home and shop. Denise's first impression of the tiny shop follows her first sight of the Paradise: 'among all this bareness, her eyes still full of the bright displays at the Ladies' Paradise, was the shop on the ground floor, crushed by a low ceiling, topped by a very low mezzanine floor, with prison-like, half-moon shaped windows' (p. 7). Compared to the vibrancy of the Ladies' Paradise, Baudu's tiny shop seems like an archaic remnant of old Paris and past modes of commerce. Baudu's shop is 'crushed' by its own ceiling, whereas the Paradise seems to extend endlessly into the night, a beacon of light in the new Paris of 'endless spectacle' (p. 4). There is no sense of vibrancy to the old shop; it is an oppressive and bare place. The difference in the depiction of each shop's windows is particularly interesting. In Baudu's, 'To the right and left, woodwork of the same colour as the sign-board – bottle-green, shaded by time with ochre and pitch – surrounded two deep-set windows, black and dusty, in which the heaped-up goods could hardly be seen' (p. 7). In the Paradise, windows are endless, and afford highly valued visibility to the window-dressers, a distinct contrast to Baudu's prison-like windows, which seem to keep both customers out and the goods locked in. There is no spectacle to her Uncle's shop, despite its close proximity to the Paradise; instead it is a depressing signifier of the death of old modes of commerce and society – one that

[379] Alison M.K. Walls, *The Sentiment of Spending,* p. 116.
[380] Émile Zola quoted in Michael Barry Miller, *The Bon Marché: Bourgeois Culture and the Department Store,* p. 177.

isolates Baudu's shop from the network of consumerism that was beginning to dominate the streets.

Gaslight helps to indicate the stark contrast between the two shops. Both contain its lighting, and being so close to each other, one would presume run off the same network. Gaslight is invasive, entering both modern and older spaces, and is a constant reminder of the necessary connectivity of the new Paris and its economical systems. It may cast its light in the smallest hovel and on the largest monuments of Haussmann's cultural and architectural upheaval. In Baudu's shop-home, Zola describes how 'In the winter the gas had to be kept burning from morning to night. When the weather allowed them to do without it, the effect was even more depressing' (p. 13). The multisensory effects of gas dampen the usually cheering effect of light in such a small home. In close quarters, it creates a suffocating atmosphere of claustrophobia, Zola describing how 'the gas jet was hissing in the dead, stifling air of the little room' (p. 27). Gaslight emphasises the environment in which it is based, it exposes, and if the space is already oppressive, then it will be made even more so. Conversely, the Ladies' Paradise is envisioned as a palace of light that enlivens nighttime Paris. As Denise looks at her Uncle's shop and back towards the Paradise, there is a clear indication of the difference:

> It was a vision of old Paris, soaked through, and it made her shiver, surprised and dismayed to find the great city so cold and ugly. But on the other side of the road the deep rows of gas burners at the Ladies' Paradise were being lit. She drew nearer, once more attracted and, as it were, warmed by this source of blazing light. The machine was still humming, still active, still letting off steam in a final roar, while salesmen were folding up the materials and cashiers counting all their takings (p. 28).

The stark realities of Baudu's shop-home are further exposed and emphasised by the hyperreal glare of the Paradise's gas lamps, which are reminiscent of the theatre lights of *Nana* that cast their light over the cracks beneath plaster and gilding. The Paradise is a 'machine', a complex system that relies on the procession of desire and satisfaction. The gas glorifies such processes, as it 'warms' and attracts Denise, but isolates Baudu's 'cold' and 'ugly' home. The glare of the Paradise's lamps turns the store itself into an observant lamp, a light that exposes the disparity between new and old Paris, warming and hypnotising those who witness its light. The Paradise's lamps create a hyperreal space, especially in contrast to the stark realism of Baudu's shop.

They glorify the surface aesthetics that consumer culture relies on, and cast the old modes of commerce, and old Paris, into shadow.

The Ladies' Paradise makes promises to Denise, offering her the antithesis to her Uncle's shop and suggesting the newly renovated Paris and its culture as modern and exciting. It is warm as opposed to cold, and seductively illuminated in comparison to the dark, dingy oppressiveness of the tiny shop opposite. It shines as a symbol of the new city:

> At this time of night, the Ladies' Paradise, with its furnace-like glare, seduced her completely. In the great metropolis, dark and silent under the rain, in this Paris of which she knew nothing, it was burning like a beacon, it alone seemed to be the light and life of the city (p. 28).

The repeated references to her seduction by the Paradise detail Zola's ideas of the role of women within the interconnected consumerist network. The store, and the allure of its gaslight, wears away personal agency through suggestion of satisfaction, and the appeal of a shared consumer consciousness. The symbolism of the Ladies' Paradise burning like a 'beacon' in the Paris night suggests an essential attraction towards the spectacle of spending, and indeed the appeal of spectacle itself. *The Oxford Dictionary of English* defines a beacon as 'A fire or light set up in a high or prominent position as a warning, signal, or celebration'.[381] In this instance, the Paradise's glow potentially signifies all three ideas. The surface image of the Paradise is what is made to seem most appealing to Denise, as it offers her dreams that 'made her tremble with desire and fear' (p. 28). In the original French text, Zola uses the word 'phare',[382] which roughly translates to its English equivalent, beacon, but is also used to refer to a lighthouse. Again, this image conjures ideas of both safety and threat, as it suggests the safety of the shore, but also of approaching danger. The Department Store is at once enticing and isolating; it offers a deceitful image of inclusion and exclusivity, with its reflective windows and spread of light onto the street, yet is still democratic in its ultimate capitalist aims – only those with money are meant to enter, and only those who spend it, or work there and dedicate their lives to it, as is the case with Denise, can consider themselves a part of this culture.

In the day-lit open spaces of the building, natural light suggests a loss of economic control to Octave Mouret, owner of the Paradise. Positioning himself beside

[381] *The Oxford Dictionary of English* (Oxford: Oxford University Press, 2010) p. 142
[382] Émile Zola, *Au Bonheur des Dames* (Paris: G. Charpentier, 1895) p. 33.

a balustrade in the main hall where he 'dominated the whole shop' in a place of Panoptic vision, the emptiness of the shop becomes 'heart-breaking' (p. 94). Mouret can command the gas in the Paradise, unlike the natural light that is beyond his control:

> But what made Mouret's heart ache most of all was the deathly silence of the hall: the light fell on it from above, filtered through a frosted glass roof, into a diffused white dust suspended over the silk department, which seemed to be sleeping amid the chilly silence of a chapel (p. 98).

Mouret's discontent with the quietness of the Paradise is suggested through the resumption of the natural reality of day, as the sunlight filters through the glass roof. Gas lighting may be manipulated in order to enliven an atmosphere, yet under the sun, the Paradise loses one of its most persuasive consumerist tools. Consider the difference between the 'sleeping silks', and the coats that were 'bursting with energy' (p.28) in the light of the gas. The Paradise remains a quasi-religious space, yet it is positioned more as an environment of cold archaicness as opposed to a place of worship. What has previously been used as a term to describe the ultimate faith of the consumers is reversed to suggest disaffection with consumer culture, as the Paradise is turned into an abandoned, silent chapel. If the Paradise is an empty chapel inside, then Mouret's endeavours are failing. Natural light exposes the Paradise, yet as intimated by the image of the 'sleeping' silks of day, the Paradise awakens as night falls.

As the sale reaches its end, the Paradise is enlivened through the lighting contrasts that emerge: 'Inside, the flaring gas jets, burning in the dusk, had illuminated the dramatic moments of the sale, it was like a battlefield still hot from the massacre of materials' (p. 116). The light of the gas creates both a spatial contrast in the portrayal of the Paradise, and a metaphorical gulf between the serenity of the chapel-like main hall and the 'battlefield' the Paradise becomes in the height of a sale. Gaslight is again associated with the loss of individual autonomy, and an indicator of the necessary interconnectedness of consumer culture; Mouret's military-like view of the shop floor is totally detached from the idea of people as individual, as he acknowledges the mass, and not the individual within his store. The shoppers, specifically women, are made into an army of consumers, under the command of the capitalist directive. Indeed, Zola describes how in the lace department, 'lace and underclothes unfolded, crumpled, thrown about everywhere, gave the impression that

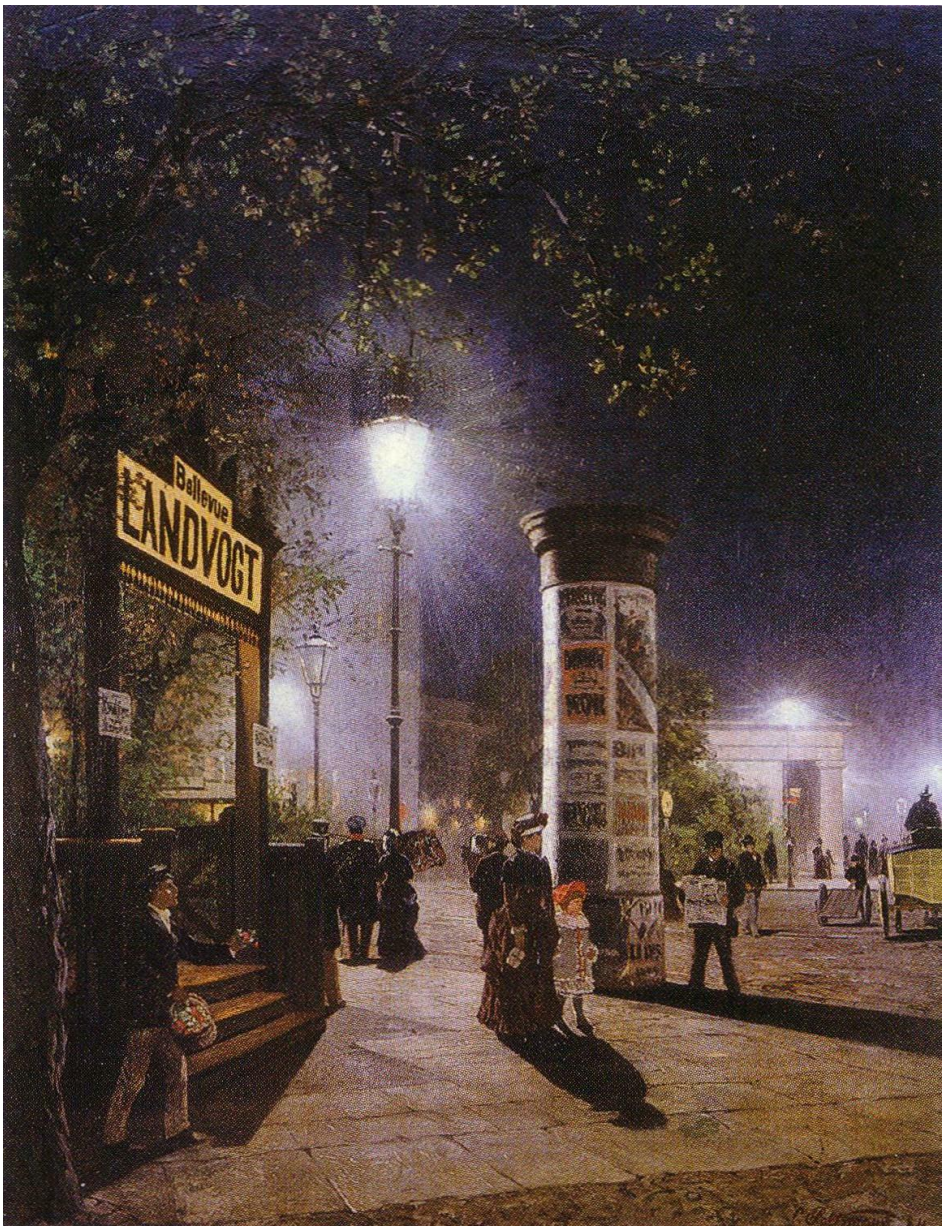
an army of women had undressed there haphazardly in a wave of desire' (p. 117). The post-sale world of the Paradise exposes the new culture that was engulfing Paris. The frenzied desire for material commodity eventually triumphs over the image of the Paradise as a serene chapel, drawing a parallel between a kind of religious faith in the culture of consumerism and the unquestioning devotion of an army of shoppers.

Gaslight dominated the image of mid-to-late nineteenth century cultures of display and spectacle. It cultivated the power of vision in exterior places of display, and awakened indoor arenas of commodity and consumerism. In the inherent attributes of its light and network, we can see an extended metaphor that spoke for both the interconnectivity of the newly modern societies of the city, and of the individual icons of artifice, such as the theatre, department store and Arcades, that were erected on the cityscape. One of these icons, the Department Store, raises interesting issues regarding the newly connected city networks, and the isolation of individuals. It was a foundry of consumer culture, contained within, yet oddly independent of, the new networks of light, capitalism and desire that were emerging on the streets. Denise's relationship to the Ladies' Paradise, and the relationship of women to shopping in general, made her both subject and object, both commodity and consumer – reflecting gaslight's nature to make individuals subject or object of the Gaze, and to paraphrase Sala, to make them aware of the 'perpetual bull's-eye' they must wear to achieve an urban gaze. Upon the streets, it lit the newly developing cultures of extravagance and shopping, facets of modern life that both influenced and were influenced by the architectural symbols of modernity; the department store and the theatre.

Overwhelmingly, gaslight acts as a symbol of the newly emerging capitalist networks, as its interconnectivity and interaction resonated within the cycles of desire and consumption. Gaslight helped to create the phantasmagoria of capitalism; it enticed and seduced, promoted a consumer *image* in its light, and anonymised individuals within its glare. It helped to create a new reality that did not subscribe to the expected order of day and night; a third, alternative space that was both disaffecting and alluring. The golden glare of gaslight lit the leisure classes' capitalist pursuits, becoming a literary metaphor for the isolation within inclusion that it promoted. The streets, or the 'fire maps' of great nineteenth-century cities became networks in themselves, where the great foundries of consumer culture – the theatres, shops and areas of public display – mirrored the networked position of the gas

network's distilleries and lamps. Desire, both consumerist and sexual, was promoted and repressed under the lamps of the streets and arcades. It was not *quite* the level of artificiality that Baudrillard's ideas of hyperreality suggest, even though it sometimes approached it, rather, it may be considered as suggesting a kind of *hyperunreality*, as it created life out of darkness and night. Gas-lit night created a third order, one that was populated by pleasure-seekers, and relentless in its colonization of people, space, and time.

Chapter 4 – Electric Light



Carl Saltzmann, 'The First Electric Street Lighting in Berlin', 1882.

4.1 Electric Light in the Nineteenth Century: Evolution and Revolution

Electric light was the last major evolution in the nineteenth century's lightscape, yet the concept of electric light and power had existed long before its perfection into a practical and widely accepted technology. Electric light and power developed from their earlier roots in eighteenth-century science, where they were envisioned as a harnessing of the powerful force of nature employed for human benefit, and also as a technology of spectacle. Luigi Galvani captured public attention as he attempted to imbue life into dead animals by applying electricity to their nervous systems. Benjamin Franklin's experiments with the kite, key and lightning also became part of the fantastical narrative of electrical development. Combined with these preconceived ideas of electricity as spectacle and thoroughly modern technology, the application of electricity in homes, workplaces and public space in the second half of the nineteenth century led to electric light gaining a unique cultural resonance during the late Victorian period.

> Electricity, Alex Goody writes, 'transformed Victorian Culture':
>
> [I]t was electric light that epitomised this transforming power […] the coming of electric light is a transformation of culture at a fundamental level; it marks the coming of what Marshall McLuhan, in *Understanding Media,* calls 'the electric age.'[383]

Electric light was both symbol and catalyst of the late nineteenth-century emergence of modernity. McLuhan claims that electric light had a distinct cultural and psychological impact on the way people thought of modernity: 'electric light is pure information […] a medium without a message', further suggesting that its light 'has no content, and in this purity it ushers in a modern world where instant communication connects us in a web of interaction'.[384] The introduction of electric light and its networks of power and vision were a forerunner of mass media, and the digital technological experience that came to define the twentieth century. McLuhan's analysis of electric light as a 'medium without a message' suggests the impersonality of the light; it did not have the same *voice* as other light sources that had preceded it. There was no warmth to its light; it did not create shadow in the same way as a flame light, nor did it create the same intimate personal connection as these prior light

[383] Alex Goody, *Technology, Literature and Culture* (Cambridge: Polity Press, 2011) p. 7.
[384] Marshall McLuhan, *Understanding Media* (New York: Routledge, 2001) p. 8.

sources. There is an absence of life in the electric bulb. It does not *speak* to its occupant, it simply lights their surroundings with a much more absolute light than had come before. As Bachelard suggests: 'The electric lightbulb will never provoke in us the reveries of this living lamp which made light out of oil'.[385] Electric light is instant, there is little intimacy involved in the care and maintenance of its light, it is merely flicking a switch: 'You come home, turn on the switch, and without fire, without a match, the whole house lights up.'[386] While public electric lighting was overtly obvious to those who occupied electrified cities, domestic electric lighting held distinct class connotations. It was not until the very late nineteenth century that electric light began to be used in homes, in what Christoph Asendorf terms the 'first electrification wave of 1880-1890'.[387] Carol Baker Sapora suggests that electricity in the home 'exemplified conspicuous consumption'.[388] Installation of electricity in the home in its early stages of development was an expensive and complicated endeavour, and so was reserved for the wealthy. It required the employment of an electrician, a brand new trade that was essential to electric light's growth, as well as the necessity of periodical checks, and of course, the bill for the electricity.

Christoph Asendorf summarises nineteenth-century ideas of the light: 'To judge by contemporary descriptions, the specific quality of electric light was that it was everywhere present, and did not, like the gas light, illuminate only a point in the darkness.'[389] It was overwhelmingly penetrative and all-seeing in comparison to gaslight. Wolfgang Schivelbusch quotes from *La Lumiére électrique* as it details the effect arc lighting had on the Paris streets in 1844: 'The light, which flooded a large area, was so strong that ladies opened up their umbrellas – not as a tribute to the inventors, but in order to protect themselves from the rays of this mysterious new sun.'[390] Electric light was overwhelmingly modern, invasive and impersonal. It further dissolved the natures of day and night that gaslight had blurred in the preceding decades.

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[385] Gaston Bachelard, *The Flame of a Candle,* p. 64.
[386] H. de Parville, *L'Electricité et ses applications,* (Paris, 1883) p. 355.
[387] Christoph Asendorf, *Batteries of Life: On the History of Things and Their Perception in Modernity,* trans. Don Reneau (California: University of California Press, 1993) p. 162.
[388] Carol Baker Sapora, 'Undine Spragg, the Mirror and the Lamp' in *Memorial Boxes and Guarded Interiors: Edith Wharton and Material Culture,* ed. Gary Totten (Alabama: The University of Alabama Press, 2007) p. 268.
[389] Christoph Asendorf, *Batteries of Life: On the History of Things and Their Perception in Modernity,* p. 162.
[390] *La Lumiére électrique,* 1883 quoted in Wolfgang Schivelbusch, *Disenchanted Night,* p. 55.

Fictional forms of electric light and power existed prior to its technological perfection. Gaslight had proved that widespread lighting networks could be successfully implemented and electricity promised a light free of gaslight's faults. It was brighter and safer, and lacked some of the negative side effects of gas such as its intense heat and smell. Jules Verne, the prophetic science fiction author, portrayed it in a way that suggested electric light was integral to the advance of human knowledge and exploration. However, coinciding with the massive growth of electricity in public and domestic spaces in the last decades of the century, and subsequent altered perceptions, its literary image changed. It began to be seen as something authoritarian, its blinding white light a symbol of control and power, especially in the works of H.G. Wells. Yet this opinion too was set to change rapidly as it became the socially and culturally accepted form of light in the early years of the twentieth century. Electric light was a nineteenth-century idea that spoke of the future, and promised cleanliness, efficiency and modernity, yet its spread was met with mixed reactions that dictated its transitional literary representations during the period.

Electric light was at first harsh, impersonal and stark. Its whiteness was at the same time praised for its purity and criticised for its blinding power. During trials of electric lighting systems in the City of London in the 1880s, electric lighting in the winding streets and alleys tended 'to make the task of lighting with a medium giving intense and sharply-defined shadows one of considerable difficulty'.[391] Wolfgang Schivelbusch argues that 'Electric light called for completely different treatment [in shading and installation], not so much because it was brighter, but mainly because it was incandescent light, which possessed a hard, disembodied, abstract quality'.[392] It was even more distantly removed from its origins than gaslight, yet was somehow more powerful, heightening the public's initial disaffection with it. Unlike any of the light sources that came before, its artificial light was white, as opposed to a yellowy orange, and it became a symbol of man's ultimate control over nature, shaping lightning into light as opposed to taming fire.

The psychological difference in the observer's reaction to the harsh light was an issue that had to be surmounted by the inventors and innovators of electric light, who, similarly to gas's advocates, faced a difficult journey from the light's inception to its widespread adoption. A number of scientists, physicists and engineers battled

[391] 'Electric Lighting for the City of London,' *Electrician* 6 (April 2, 1881) p. 244.
[392] Wolfgang Schivelbusch, *Disenchanted Night,* p. 178.

with exactly how to harness the harsh power of electricity into a publicly acceptable and easily maintained source of light from the very start of the nineteenth century. The first electric lights were crudely primitive compared to the modern light bulb. Humphry Davy observed in 1800 that light could be produced from discharging an electric current between two carbon electrodes.[393] However, Davy also noted in his 1812 accounts of these early experiments how the wire that crossed the electrodes became:

> [R]ed hot, then white hot, the brilliancy of the light was soon insupportable to the eye, and in a few seconds the metal fell fused into globules […] points of charcoal ignited by it produced a light so vivid, that even the sunshine compared with it appeared feeble.[394]

Electric arc lighting's tendency to provide too much light plagued its development and acceptance by the wider public; it was, at first, overwhelming. Jane Brox writes that 'Arc lights, even with shades, shone far too intensely to illuminate domestic interiors, and they could not be made less powerful – nineteenth century scientists would say they were "indivisible"'.[395] Early electric light could not be pared down enough to be an appropriate light for domestic, and indeed many urban, situations. McLuhan's description of electric light as pure information is highly applicable to these early electric experiments; the *dividing* of light from the power of electricity proved a difficult task for early electric-lighting pioneers, and spurred on the development of the incandescent light bulb.

This did not mean that electric light's use was completely shunned during its initial development. Emerging arc lamps faced a decidedly mixed reaction yet they were still deemed useful in some circumstances, such as in 'factories, shops, railway stations, building sites, wharves and so on – in short, to large spaces with an insatiable appetite for light. It was simply too intense for use in other places'.[396] It followed gas in lighting industrial and commercial spaces, where its bright whiteness was praised for showing things as they were, as opposed to being tinged with the yellow glow of gas lighting. Chris Otter notes that early uses of electric light in factories were 'vital weapons in the war on yellowness [of gas]',[397] and more widely used in trades

[393] Wolfgang Schivelbusch, *Disenchanted Night,* p. 52.
[394] Humphry Davy, *Elements of Chemical Philosophy: Part I, Vol. I* (New York: Bradford and Inskeep, 1812) p. 85.
[395] Jane Brox, *Brilliant,* p. 110.
[396] Wolfgang Schivelbusch, *Disenchanted Night,* p. 54.
[397] Chris Otter, *The Victorian Eye,* p. 183.

concerning coloured cloth and fabric for this reason. Otter quotes a report from *The Warehouseman and Drapers' Trade Journal,* in which the writer stated that: 'Not merely do blues and greens get mixed up [under gaslight], but almost every tint and shade is altered by the yellow of the lamps and candles, and it is one of the great advantages of electric light that it enables us to see colours as they really are.'[398] Yet electric light's authenticity was a harsh one, and came at a cost. Its whiteness was a stark contrast to the warmth of candles and gas, and although it was praised for its pure brightness, its white light also caused many different problems.

In some cases, its brightness was enough to permanently damage the eyes of those who worked both with and by it. Edward Nettleship, surgeon of the Royal London Ophthalmological Hospital noted in his 1880 textbook, *The Students' Guide to Diseases of the Eye,* that men who worked with such lights suffered from attacks 'apparently identical to snow blindness'.[399] Symbolically, electric light became associated not only with stark realism, but also with blinding whiteness. Early electric lights had to be meticulously maintained - arc lamps, for example, needed to have their carbon rods trimmed – yet their maintenance was not the same psychologically as trimming the wick to sustain the light of a candle, as it threatened permanent damage to the eye. There was also a glaring impersonality to the electric light that was not evident in flame lights; a habit to display harsh truths and authenticities – a different quality to the candle's exposition, which was associated more with honesty than the starkness of the truth. Writing during a blackout in the Second World War, the Art Historian Wilhelm Hausenstein ruminates on how, when he was forced to use candles:

> Electric light imparts too much brightness and thus things lose body, outline, substance – in short, their essence. In candlelight objects cast much more significant shadows, shadows that have the power to actually create forms. Candles give as much light as things need in order to be what they are – optimally, so to speak – and allows them to retain their poetic element.[400]

Electric light dominates and displaces the object, whereas the candle's flame light and its relative shadow enliven objects with its own illuminatory attributes. Hausenstein intimates that electric light suffers through its overexposure of objects – things lose

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[398] *The Warehouseman and Drapers' Trade Journal* cited in Chris Otter, *The Victorian Eye,* pp. 183-184.
[399] Edward Nettleship, *Diseases of the Eye,* 5th ed. (Philadeplhia: Lea Bros., 1890) p. 276.
[400] Wilhelm Hausenstein, *Licht unter dem Horizont, Tagebücher vxon 1942 bis 194* (Munich, 1967) quoted in Wolfgang Schivelbusch, *Disenchanted Night,* p. 178.

their ‘essence’ and ‘poetic element’ through being so visually exposed by the harsh lights.

Arc lighting was experimented with in the cities of the early nineteenth century, yet it was never quite successful until its technologies and delivery improved. Trials of arc lighting as a form of public street lighting failed in Paris in 1841 due to the arcs burning out too quickly.[401] It was difficult to make the carbon and filament burn slowly, due to combustion being catalysed by oxygen in the air. The development of electric light began to stagnate in the wake of its early struggles, as well as due to competition from the quickly developing industries of gas around the same time. Arc lighting was too powerful to be used in the same way as gaslight – and more importantly, gas lighting networks and systems were becoming embedded in public and domestic life, people only just acclimatising to the qualities and presence of the light and processes.

Around thirty years after Paris’s failed experiment with civil lighting, electric light’s development received a much-needed boost from German chemist Hermann Sprengel, who in 1865 engineered the vacuum that would make light bulbs possible. This enabled work to commence on projects that could secure the air of a sealed lamp and allow an electric filament to burn in a vacuum for the first time, dramatically increasing the efficiency of electric lights, as well as eradicating the blinding light of arc lamps. Sprengel’s invention kick-started the race to create the light bulb - a race that was reminiscent of Murdoch, Winsor, and Lebon’s struggle to create gas lamps.

The challenge of perfect Electric Light and the Invention of the Light Bulb

In 1878, Joseph Swan created a much more practical form of electric light than the arc lights that had come before. Aided by Sprengel’s vacuum, his new incandescent bulb could last up to 13.5 hours, and was safer and steadier than the fizzing carbon arc lamps. However, it was not immediately successful. The transactions of the Newcastle Chemical Society note that in December 1878, Swan described an experiment in which he passed a current of electricity through a vacuum sealed glass globe, whereby the rod began to ‘glow with great splendour,’ however, the paper filament in the lamp meant that soon the glass globe blackened from soot, dimming

[401] Greg L. Thomas, *Making Life’s Puzzle Pieces Fit* (XLibris, 2009) p. 54.

the light from within.[402] Swan's bulb was improved upon by American Thomas Edison, who claimed that he 'saw the thing had not gone so far but that I had a chance. I saw that what had been done had never been made practically useful'.[403] Edison understood the potential of Swan's idea, yet he also understood that fulfilling that promise required numerous essential changes to the filament and how quickly and efficiently air was extracted from the bulb.

Edison's Menlo Park, an estate he bought in upstate New York for the purposes of scientific experiment, became a lighting utopia as he attempted to perfect the incandescent light bulb. It was best described as an 'invention factory,' Jane Brox suggesting that 'what went on there was new and bewildering to any outside observer'.[404] Menlo Park was a symbol of the advance of electrical technologies, it became a way for the public to engage with electric light in a way unlike the typical exhibitions that came before. Wealthy New Yorkers arrived by train and stagecoach at the upstate laboratory compound, with extra trains laid on especially for the purpose, and Edison began to invite the press to visit his town-sized experiment. Randall E. Stross writes:

> [S]tung by the sceptics and challengers who spoke up after the *Weekly Herald* article [in which Edison claimed to have created bulbs that burned for 108 hours], Edison felt strongly that he now had to show, not tell. He responded with a public promise: in short order, no later than the end of that week, he would light up ten houses in Menlo Park with his electric light, and set up ten electric streetlamps.[405]

The *spectacle* of electric light would come to characterise the light bulb's early years, as this new, bizarrely flameless light captured public and literary imaginations. It had a very dramatic potential, and Edison was keen to emphasise that. On New Year's Eve 1878, Menlo Park was transformed into a stage on which electric light would be the main attraction. Among the experiments on display were an electric bulb submerged in water, onlookers astounded at its ability to still give light while underneath the surface, and in another area, a lab assistant was tasked with turning the

[402] Account from the Newcastle Chemical Society quoted from Jane Brox, *Brilliant,* p. 111.
[403] Edison quoted in Paul Israel, *Edison: A Life of Invention* (New York: John Wiley & Sons, Inc., 1998) p. 166.
[404] Jane Brox, *Brilliant,* p. 111.
[405] Randall E. Stross, *The Wizard of Menlo Park: How Thomas Alva Edison invented the Modern World* (New York: Crown Publishing, 2007) p. 102.

light on and off again in quick succession to display the instantaneousness of the electricity.[406]

Edison's different displays emphasised the difference and advantages of electric over gaslight. The light could work underwater, impossible with a flame light, and was instantly accessible simply by flicking a switch. Similarly, around the Western world, exhibitions of Science, Industry and Art brought the potential of electric lighting to a wider audience, and more intense public scrutiny and interest. K.G. Beauchamp details many of these exhibitions in *Exhibiting Electricity;* he describes the International Exhibition of Industry, Science and Art in Edinburgh in 1886, in which 'a striking feature was illumination by electric light, still an attraction to the public at a time when few buildings and even fewer homes enjoyed this facility'.[407] The exhibition attracted two million visitors in its six-month opening period. Although electric light was far from being perfected into the networked, powerful illumination that it eventually became, it was rapidly developing its own symbolic associations with the modern and the value of technology's potential.

London, Vienna, Paris, Glasgow and Prague, amongst others, held large exhibitions dedicated to electricity, where its light was often the most apparent example of its influential power and promise. An Exhibition in Glasgow in 1880 provided the first major public demonstration of Swan's new carbon filament incandescent lights, and resulted in Swan gaining his first commercial request for an electric lighting installation from Glasgow General Post Office.[408] Paris's International Exposition of Electricity in 1881 was the largest and most popular exhibition to be held in the period, where the work of Edison and Swan was demonstrated on a massive scale. The two inventors had unwillingly combined their research by this stage, after a number of lawsuits from both parties, and formed the Ediswan Company. One of the premier attractions at the Paris Exposition was an Ediswan electric chandelier, which consisted of 350 hammered brass flowers each containing an electric bulb. Beauchamp quotes from a contemporary account as saying the great chandelier functioned 'as well as, if not better than, gas to elaborate

[406] Randall E. Stross, *The Wizard of Menlo Park*, p. 103.
[407] K.G. Beauchamp, *Exhibiting Electricity* (London: The Institution of Electrical Engineers, 1997) pp. 145-147
[408] Frank Andrews, 'A Short History of Electric Light' (2005) from http://www.debook.com/Bulbs/LB01swan.htm [accessed on 10/8/15]

highly aesthetical designs in central and other lustres'.[409] The constant comparisons to gas restricted electricity's acceptance, and although incandescent electricity was often compared favourably to gas in these controlled environments, it was a perception that characterised its early appreciation. Electric light was judged on exactly how much it could better what gas lighting had already achieved. In countries around the world, it was a symbol of the newly modern, an indicator that not only had electricity been tamed but also that the age of gas could be improved upon. It held the promise and potential of a, quite literally, brighter future.

However, even though the Exhibitions and Expositions were huge successes during the 1880s, electric lighting was still far from widespread public acceptance. London's Victoria Embankment lit the northern side of the Thames with electric light in 1878, yet just six years later in 1884, the arc lamps were replaced by the gas which preceded them.

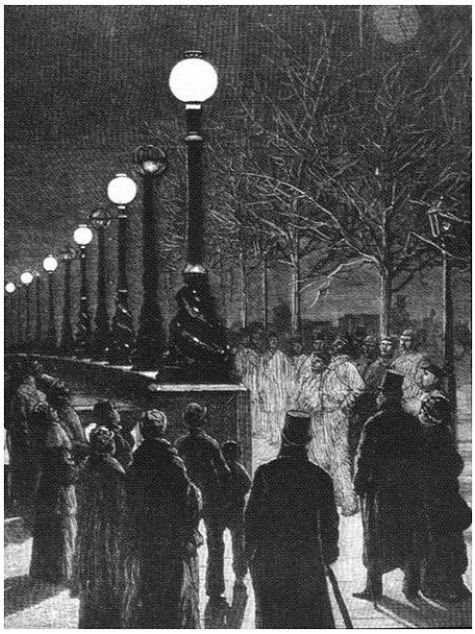

Image of Jablochkoff Candles on Victoria Embankment, 1878, artist unknown.

It was too expensive to run such an isolated group of electric Jablochkoff candles, so they were repurposed into gaslights that could run off the already well-established gas networks of London. It was an issue that hindered the growth of electric light in Britain until the creation of the National Grid in 1926, which connected fragmented electric networks that had emerged across the country in the late nineteenth century.

[409] Quote taken from K.G. Beauchamp, *Exhibiting Electricity,* p. 166.

Alongside the more technologically-minded criticisms of the lights, and the economic problems surrounding their installation, there was also opposition to the quality of their lights during the early years of its public use. Gaslight and electric light became two forces intent on the same goal, yet with intensely different attributes and qualities; people had to learn to understand these contrasts, as the shock of having abundant light was still barely a generation old. Years earlier, gas had been criticised for many of the same reasons electric light was now, while in the face of this new light, gas was being praised. This notion is explicitly obvious in Robert Louis Stevenson's essay 'A Plea for Gas Lamps', first published in 1881 in a collection of papers and essays entitled *Virginibus Puerisque,* which argues against the use of electricity in London's streets, and extols the values of gas, which was also rejected by some upon its introduction.

Stevenson's Plea and the Issue of Perceptual Habits

Stevenson's essay encapsulates Chris Otter's notion of clashing perceptual habits that formed in the wake of rapid changes to artificial lighting during the nineteenth century; they 'had to be slowly learned: instantaneous revolution in colour perception is, perhaps, physiologically impossible since such perception is always relative and never absolute'.[410] People were not used to the blinding light of electricity, much as they had to grow accustomed to the qualities of gaslight decades before. In Stevenson's essay he directly contrasts gaslight with electric. He extols the virtues of the lamplighter, the last link between humanity and light that was to be eradicated once systems of electric light proved their jobs obsolete: 'God bless the lamplighter! […] For the term of his twilight diligence is near at hand; and for not much longer shall we watch him speeding up the street and, at measured intervals, knocking another luminous hole into the dusk.'[411] Stevenson's respect for these stewards of light suggests the further loss of any psychological human connection to artificial illumination that impersonal, networked lighting systems wrought.

Gaslight was nostalgically reimagined as a social light; it was the light of 'mankind and its supper parties' (p. 251), as it provided 'a warm domestic radiance fit

[410] Chris Otter, *The Victorian Eye,* p. 185.
[411] Robert Louis Stevenson, 'A Plea for Gas Lamps' in *Virginibus Puerisque* (Boston: Small, Maynard & Co., 1907) p. 253.

to eat by' (p. 255). However, his writing, while reverential in terms of its opinion of gaslight, also highlights a number of its flaws which electric light largely solved. Gas was only able to 'knock holes' in the darkness; it mapped the city in its regular intervals of light and shade, but did not eliminate the darkness as the much brighter, and whiter, electric light did. This was not preferable to Stevenson, whose essay suggests the intimate psychological importance of understanding both the lighting, and the actual light, of gas lamps:

> Our tame stars are to come out in future, not one by one, but all in a body and at once. A sedate electrician somewhere in a back office touches a spring – and behold! From one end to another of the city, from east to west, from the Alexandra to the Crystal Palace, there is light! *Fiat Lux*, says the sedate electrician.[412]

Stevenson's concerns are reminiscent of the contrast drawn by Gaston Bachelard between the intensely personal poetics of the candle and the widely accepted electric light of the twentieth century: 'We have entered into an age of administered light. Our only role is to flip a switch. We are no more than the mechanical subject of a mechanical gesture.'[413] Each major development in nineteenth-century lighting further detached the individual from the process and qualities of light; the actor of the verb 'to light' had shifted from Prometheus to a 'sedate electrician' detached from his light. The electrician is just as much an individual as the lamplighter of course, yet Stevenson suggests how his invisibility dehumanises the personal connection to electric light. As illumination was refined through fire to candles, and later from gas to electric, the light became purer, and more focused, yet at the same time more distant psychologically, as the source and combustion of each light source moved further and further away from the individual.

Stevenson criticizes the lights that illuminate Paris: 'a new sort of urban star now shines out nightly, horrible, unearthly, obnoxious to the human eye; a lamp for a nightmare!' Electric light is seen to be unnatural. Stevenson even goes so far as to state: 'Such a light as this should shine only on murders and public crime, or along the corridors of lunatic asylums, a horror to heighten horror.'[414] He also reflects on humanity's relationship with the flame as he extols: 'Mankind, you would have thought, might have remained content with what Prometheus stole for them and not

[412] Robert Louis Stevenson, 'A Plea for Gas Lamps' in *Virginibus Puerisque,* p. 253
[413] Gaston Bachelard, *The Flame of a Candle,* p. 64.
[414] Robert Louis Stevenson, 'A Plea for Gas Lamps' in *Virginibus Puerisque,* p. 254.

gone fishing the profound heaven with kites and domesticate the wildfire of the storm.'[415] Stevenson directly acknowledges the apocryphal tale of Benjamin Franklin's experiment with the kite, the key and lightning as he laments humanity's need to domesticate the violent natural force of electricity. The comparison that Stevenson draws between Prometheus's fire and the taming of electricity helps to indicate the inherently different qualities of electric and flame lighting. However, even Stevenson could not avoid acknowledging the light as a symbol of encroaching modernity, as he described it as 'star-rise by electricity' and as the 'spectacle of the future'.[416] Electric light's pervasive nature as mass illuminator also emphasised the increasing lack of individuality in the face of an impersonal network of illumination, and the entrance into a highly connected and networked modern age.

Chris Otter documents a number of contemporary reactions to electric light that corroborate its ambiguous reception in Stevenson's essay. He quotes from the records of a meeting of the Association of Municipal and Sanitary Engineers and Surveyors in 1882: 'There is something irritating in the electric light, and the effect, if it were universally applied must be […] to have some disastrous effect on the nerves.'[417] Otter notes how:

> The flight from yellowness, then, was not universally lauded. Most people were accustomed to seeing yellow. This is how normal light appeared: 'ochreous, cosy, peppery.' The whiteness of electric illumination was often an unpleasant shock, registered chromatically as bluish.[418]

Similarly, actress Ellen Terry contrasted the 'thick softness' of gaslight with the 'naked trashiness' of electricity.[419] As electric illumination became more widespread it was praised for its ease of use, and for its consistency and dispersal of light. Jane Brox suggests 'electric light was now but one of the things that made life easier and also seemed to define what it meant to be modern'.[420] This encroaching modernity was treated with both apprehension and excitement, Carolyn Marvin encapsulating the varying degrees of reception in her summation of Edison's publically perceived image: 'Edison was both godlike, because he could manipulate the lightning, and a

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[415] Robert Louis Stevenson, 'A Plea for Gas Lamps' in *Virginibus Puerisque,* p. 255.
[416] Robert Louis Stevenson, 'A Plea for Gas Lamps' in *Virginibus Puerisque,* p. 254.
[417] Lewis Angell responding to J.C. Schoolbred, "Illumination by Electricity," *Proceedings* (Association of Municipal and Sanitary Engineers and Surveyors) 8 (June 29, 1882) p. 185 quoted in Chris Otter, *The Victorian Eye,* p. 181.
[418] Chris Otter, *The Victorian Eye,* p. 185.
[419] Ellen Terry, *The Story of My Life* (Middlesex: Echo Library, 2006) p. 104
[420] Jane Brox, *Brilliant,* p. 170.

very dark and satanic figure for the same reason. He could challenge God's order.'[421] This oppositional nature of receptions of electric light dominated its early development, as its power was at once glorious and terrifying.

Electric light developed into a symbol of modernity during the fin-de-siécle period, and reflected the parallel growth of monopoly and capitalism at this time. Wolfgang Schivelbusch makes an important point on the developing acceptance of electric light in this cultural climate:

> We can now say that in addition to electricity's cleanliness, odourlessness and harmlessness, there was another factor that made it easier for people to accept a central energy source – The nineteenth century definition of a lamp before electrification was as individualistic as the mentality of enterprise capitalism. The new definition was as 'collective' as Steinmetz's opinion that the large enterprise guaranteed individual development.[422]

What Schivelbusch suggests is a mirroring of perceptions of networked artificial light in the growing acceptance of capitalist enterprise and consumerism, a shift that characterised the movement into modernity at the start of the twentieth century. As the view of capitalist networks changed from something that created alienated individuals within its mass culture, to something that encouraged people to be seen as being included *within* a collective, so too did perceptions of electric light similarly change. At the turn of the century, instead of perceiving the possible encroachment of a regulated network into their lives, public attitude shifted towards the reassuring notion of being part of a collected whole. Capitalism began to be envisioned as something that should be encouraged in order to benefit both businesses and individual entrepreneurs, and as something that could include people rather than isolate them. There was a shift in perceptions of the idea of the 'mass', from something to be avoided (as evidenced by individuals' ongoing reliance on and relationships with candles in the face of networked gaslight and electric light) to something that provided a reassuring feeling of connectivity. This will be a theme that will be discussed in more detail as this chapter progresses.

Through this very brief summary and introduction to the development and symbolic properties of electric lighting, and its presence in the nineteenth century, we may observe three distinct stages to the appreciation and adoption of electric light,

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[421] Carolyn Marvin quoted in 'Edison's Miracle of Light' from http://www.pbs.org/wgbh/americanexperience/features/introduction/light-introduction/ [accessed on 10/8/15]

[422] Wolfgang Schivelbusch, *Disenchanted Night,* p. 76.

which are reflected in the literature of the period. Firstly, the prescient stage, where electric light is more a *symbol* of technological advancement and possibility than an actual reality – this may be witnessed in the widespread phenomenon of Electric Lighting displays at expositions and exhibitions, and in early Science Fiction, such as the works of Jules Verne where electric light is praised and revered as something fantastical. The second stage is composed of electric light solidifying its own reality and being adopted into use on streets and in buildings, while facing criticism for the qualities of its light and the approach of its technology – as characterised by Stevenson's criticisms in 'A Plea for Gas Lamps' and H.G. Wells's technophobic early science fiction novels. Thirdly, and finally, we may see the eventual acceptance of electric light as a lighting ideal, encapsulated by the realism of late-nineteenth and early-twentieth century literature by E.M. Forster and Edith Wharton, and the corresponding acceptance of collective capitalism.

4.2 Jules Verne's prophetic electric light of the 1860s and 70s

Science Fiction developed concurrently with electric light, its growth intertwined with the new illumination; here was a technology that seemed to be imagination made real, nature's energy harnessed by man, better suited to tales of fantasy than reality. In many instances fictional electric power and light existed long before the technologies' cultural acceptance and dissemination beyond the laboratory. Electric light enjoyed a double life in the early stages of its development; it was both a problematic technology persevered with by scientists and engineers, and a much more idealised vision in exhibitions and literature, the spectacle of its presence amazing the public and capturing the attention and imagination of writers.

Roger Luckhurst suggests that one of the most influential forces on the genre of Science Fiction at this time was the 'unremitting wave of technological innovations using the new force of electricity'.[423] As engineers attempted to perfect and domesticate electric light, Science Fiction was already influencing electric light's symbolic potency and associations. Luckhurst explains that 'Electricity held barely imaginable promise for the late Victorians, yet despite the celebrated phalanx of electrical engineers, there was also a sense of threat or disturbance in a visibly altered urban terrain'.[424] Electric light's capabilities faced two distinctly different perceptions during its development. It was at once terrifyingly and unimaginably powerful - lightning tamed and employed by man - yet also something that held immeasurable promise and positivity for the future. Electric light became associated with both elements of fantasy *and* the growing realisation of a modern world and society.

Electric light's evolving symbolism may be seen to a great extent in the works of Jules Verne. Paul Alkon states that 'Verne wrote amid increasing skepticism that technological progress heralds utopia. Nevertheless it is Vernian technophilia that prevailed'.[425] However, Verne's stories betray a much more complex vision of technology's worth than Alkon suggests. The appreciation of electrically-driven technological marvels such as the Nautilus in *20,000 Leagues Under the Sea* (1870), or the *Colombiad* in *From the Earth to the Moon* (1865), is challenged by Verne's more sceptical view on the use of electric light and technology in his posthumously

[423] Roger Luckhurst, *Science Fiction* (Cambridge: Polity Press, 2005) p. 25.
[424] Roger Luckhurst, *Science Fiction,* p. 26.
[425] Paul Alkon, *Science Fiction before 1900: Imagination Discovers Technology* (New York: Routledge, 2002) pp. 57-58.

published novel *Paris in the Twentieth Century* (written in 1863, published in 1994), or his *Dr. Ox* short stories (1872). These texts go against his commonly attributed technophilia, and instead suggest a sense of mistrust in the technologies he was more famed for encouraging – an idea that lingered into the later works of H.G. Wells and his contemporaries such as Edward Bellamy. To his audience, Verne's technology, and more precisely his electric light, seemed real. It seemed tangible, such was the way he described it, aided by constant reference to its real inventors and pioneers. To Verne's literary adventurers, electric light could literally and mentally enlighten, and lead the world in discovery. M. Hammerton suggests that it was perhaps Verne's ethical sensibilities that led him to present his technologies in such a way, as 'it was not acceptable for him to deceive the aspiring young with vague phrases and graceful evasions'.[426] His technologies, while ultimately fictional at this stage, were intended to be as plausible as possible. Verne took something that was problematic in its development, yet already considered futuristic and modern, and perfected it, turning it into the driving force behind his adventurers' explorations.

Verne's Extraordinary Voyages: An Exploration in Electricity

The first of Verne's 'Extraordinary Voyages', *Five Weeks in a Balloon* establishes electric light's associations with power and control, while also intimating the exploratory benefits of such a penetrative light source. Originally published in 1863 (with an English translation available by 1869), the story tells the tale of three adventurers who attempt to discover the source of the Nile in a balloon flight across Africa. At the start of the journey, Verne uses the hearth as an image of homeliness and the light of comfort. He asks: 'What had fate in store for these daring adventurers? Should they ever again find themselves in the midst of their friends, or seated at the domestic hearth?'[427] As in Gaskell's works, the hearth is protective, yet also limiting, as to experience its light and aura one must remain in front of it, and not reach beyond the bounds of its illumination. The whole notion of adventure is the antithesis to the hearth; there can be no expansion outwards from its flames, as one must remain contained within its aura to fully enjoy its light. Similarly, in *A Journey*

[426] M. Hammerton, 'Wells as Prophet' in *Foundation* 45 (Spring 1989) p. 24.
[427] Jules Verne, *Five Weeks in a Balloon* trans. William Lackland in *Jules Verne: Seven Novels* (New York: Barnes & Noble, 2006) p. 45. All further references to this text will be given in the main body of work unless otherwise footnoted.

to the Center of the Earth, the adventurers' last experience of domestic safety before their descent is a primitive home in Iceland where the family who inhabits it huddle around the safety of their hearth for warmth and light.[428] Fire is natural, to experience it is to submit to its warmth and light, whereas electric light, as will be shown through Verne's adventures, is much more active and exploratory.

Electric light is penetrative, whiter, and far more powerful than any flame-based light. It is invasive, and illuminates whatever area it is focused on, rather than just knocking holes in the darkness. It is a light of dominance, opening a visual field to ultimate surveillance. Indeed, in *Five Weeks in a Balloon*, the protagonists discover a prisoner captured by natives and employ a rudimentary electric searchlight to frighten his captors. After Kennedy announces that the three of them must act to save the captive man, there is some apprehension about attempting this task in the dark, to which Ferguson responds in a singular tone, "Well, and suppose it was daylight!" (p. 41). Electric light cleaves through darkness in a much more invasive and extreme way than the artificial light sources that preceded it. The unnatural breaking of the boundaries between day and night scatters the natives, who have never experienced anything other than the natural light cycle, in fear.

Ferguson's light is created by altering the Buntzen Battery on board the balloon: Ferguson connects 'two perfectly-isolated conducting wires, which served for the decomposition of the water, and, searching his travelling sack, brought forth two pieces of charcoal, cut down to a sharp point, and fixed one at each end of each wire,' which produces 'in a twinkling, an intense and dazzling light […] with an insupportable glow between the two pointed ends of charcoal, and a huge jet of electric radiance literally broke the darkness of the night' (p. 93). While scientifically inaccurate in its workings – a beam of electric light would not be able to be produced in such a 'jet' without any kind of focusing device or reflective mechanism - the light gains credibility through Verne's reference to the genuine creation of the Buntzen battery, invented in 1841 by Robert Bunsen. Verne often imbued his creations with a modicum of scientific accuracy by acknowledging important innovators in the field of electrical power and light. In this instance he tries to replicate the processes of an arc lamp, by having the carbon-based charcoal act as a filament. While this would work

[428] Jules Verne, *A Journey to the Center of the Earth* in *Jules Verne: Seven Novels* trans. William Lackland (New York: Barnes & Noble, 2006) p. 226.

to some extent, it would more than likely set fire to the balloon and the basket. Instead, this light is a highly fictionalised and idealised form of a light source that was still being perfected in reality. Handheld electric torches with focused beams did not come into being until the late-nineteenth century; it was only after the development of the dry cell battery, a battery that did not leak and so was suitable for handheld devices, that British inventor David Misell filed a patent for a handheld electric bulb-torch in 1898.[429]

Verne states that Ferguson 'darted his powerful electric jet towards various points of space,' blinding the natives so much that 'under the influence of an indescribable terror, [they] disappeared little by little in the huts, and there was complete solitude surrounding the scene' (p. 94). Ferguson's electric light, while scientifically inaccurate, displays an early example of the symbolic power of electric light as signifier of control and authority. The electric light's gaze completely reverses the power principle at work in this scene through its domination of space. Electric light is made both fantastic and terrifying through its replication of something natural, an intention of Ferguson's as Verne writes 'The doctor had, therefore, been right in counting upon the fantastic appearance of the balloon throwing out rays, as vivid as the sun's, through the intense gloom' (p. 44). The light generated by Ferguson allows the balloon's occupants to observe the natives from a visually advantageous position, and through its blinding power capture the natives in submission. Electric light is pure power through visibility; it illuminates everything within its reach and places it in a knowable and observable field.

The first example of electric light in Verne's *Five Weeks in a Balloon* helps to establish its early prophetic presence in his Extraordinary Voyages. It acts as a 'novum', an essential facet to the genre of Science Fiction, defined by Darko Suvin as 'a mediating category whose explicative potency springs from its rare bridging of literary and extraliterary'.[430] Electric power perfectly exemplified this bridging that Suvin outlines; its development was intertwined in reality and literature, as it seemed both plausible and fantastic to a nineteenth-century reader. Suvin suggests that 'SF is distinguished by the narrative dominance or hegemony of a fictional 'novum'

[429] *Transactions of the Illuminating Engineering Society,* vol. xvii, January-December 1922 (New York: Illuminating Engineering Society) pp. 135-136.
[430] Darko Suvin, *Metamorphosis of Science Fiction* (New Haven and London: Yale University Press, 1980) p. 64.

validated by cognitive logic'.[431] This is precisely what Verne's technology does: in its perfected form, it is new and ultra modern, yet grounded in the understanding of such ideas of the period. In *Five Weeks in a Balloon,* the electric light may not be considered a true novum, in that it does not establish its narrative dominance over the plot and movement of the story (which the balloon itself does), yet in Verne's subsequent stories, it becomes a much more influential factor behind this progression.

In *A Journey to the Centre of the Earth,* the trio of adventurers utilise electric light to facilitate their explorations below ground – a journey that would be impossible without such a tool. Named the 'Ruhmkorff Apparatus', in yet another instance of Verne applying the name of a prominent electrical scientist to his creations in order to lend them a sense of credibility, it is an early example of the personal electric torch. Heinrich Ruhmkorff did invent a form of portable electric light, which used a glowing geissler tube to provide light that was not focused into a beam, but instead dispersed its whiteness around itself, however at Verne's time of writing and publication (1864 in French, 1871 in English) it was still very much a work in progress. Verne's fictional perfection of this early form of portable electric light suggests the potential he envisioned in electric light for exploration and the illumination of individual endeavours. His Ruhmkorff light adapted the individual's relationship with the flame of earlier light sources, and solved some of flame light's less useful attributes. The apparatus 'makes no smell' and produces a 'white steady light'. Unlike gas lamps, or candles, 'it enables one to venture without fear of explosions into the midst of the most inflammable gases, and it is not extinguished even in the deepest waters'.[432] The verb 'enable' indicates that electric light is what has made exploration possible, and the emphasis on electric's ability to do what other lights cannot embellishes the technological value of such a light source. It is a light that eschews the constraints of the flame, yet maintains the psychological benefit of being in control of your own light source.

Electric light is again treated in a way that suggests man's replacement of the natural with a kind of engineered and harnessed power. As the three adventurers descend into the crater from which they are to start their subterranean journey, Verne

[431] Darko Suvin, *Metamorphosis of Science Fiction,* p. 63.
[432] Jules Verne, *A Journey to the Center of the Earth* in *Jules Verne: Seven Novels* trans. William Lackland (New York: Barnes & Noble, 2006) notes, p. 221. All further references to this text will be given in the main body of work unless otherwise footnoted.

emphasises the darkening of natural light: 'Now, no sun, no shadow, and therefore no guide' (p. 237). Axel also remarks when inside the caves below the crater that he 'no longer thought of sun, moon, and stars, trees, houses or towns, nor of any of those terrestrial superfluities which are necessities to men who live upon the earth's surface' (p. 259). Electric light replaces the natural light of the sun as the adventurers' guide; symbolically it speaks of human advancement beyond the constraints of nature, or the 'terrestrial superfluities' that bind humanity to knowledge and understanding of their world. Many times when electric light is used, Verne emphasises its ability to function in spaces where a natural or flame light would not. The first time the apparatus is lit:

> A sufficiently bright light dispersed the darkness of the passage. Hans carried the other apparatus, which was also put into action. This ingenious application of electricity would enable us to go on for a long time by creating an artificial light even in the midst of the most inflammable gases (p. 242).

Unlike the light of gas or candles, the travellers' electric light does not create pockets of light amidst darkness, but instead 'disperses' it. Again, Verne emphasises how the light can 'enable' the adventurers, allowing them to move further into the unknown and enlighten the mystery. The electric light is now the travellers' guide; it has replaced not only the sun as the provider of the most valuable sense of exploration, but usurped the value of other types of artificial illumination. Indeed, Axel states that 'if unfortunately we had explored this gallery with torches, a terrible explosion would have put an end to the travellers in one stroke!' (p. 249).

It is telling of the group's reliance on the light, and Verne's reliance on it as novum, that the loss of Axel's lamp is also the greatest point of despair in the plot. Axel slips when separated from the others. Injured and alone, and having damaged his lamp in the fall, he states: 'In the midst of my agony a new terror laid hold of me. In falling my lamp had got wrong. I could not set it right, and its light was paling and would soon disappear altogether' (p. 264). The terror Axel feels indicates the relationship he has developed with the isolated electric lamp, and the comfort and attachment he experiences in its light:

> I gazed painfully upon the luminous current growing weaker and weaker in the wire coil. A dim procession of moving shadows seemed slowly unfolding down the darkening walls. I scarcely dared to shut my eyes for one moment, for fear of losing the least glimmer of this precious light. Every instant it seemed about to vanish, and the dense blackness to come rolling palpably upon me (p. 264).

Axel acknowledges the light as 'precious', so much so that he fears closing his eyes in order to extend his time within the 'glimmer' of light. It no longer disperses the darkness in its damaged state, but allows it to envelop him in obscurity and terror. There is also a possible warning here regarding the over-reliance on technology. During the nineteenth century, artificial light protected people from natural darkness and its associated dangers. The technology, in a posthumanist sense, allowed humanity to move beyond being constrained by the natural cycle of light and dark. Axel's reliance on the light, and the loss of hope following its extinguishment, connotes the growing dependence on technology of the post-industrial west. Stephen Lilley suggests that technology both influences social needs, and that society shapes the need for technology[433] – this cyclical relationship is at the core of trans and posthumanist beliefs. In this instance, Verne's electric torch is something created for the adventure and the narrative, and something that perfects the electric light of society at this time. It reflects Lilley's transhumanist concept of how technology works with society. The loss of Axel's light in Verne's novel emphasises the fragile nature of trust in the new technology, and correlates with ideas that may later be seen in *Paris in the Twentieth Century.* The nature of electric light, its brightness and absoluteness, make the contrast between its light and darkness more obvious, thus reinforcing not only the boundary between life and death, but also emphasising the lessening division between humanity and technology.

This juxtaposition heightens Axel's hopelessness in this scene. The overwhelming contrast between light and dark in the caverns emphasises the tension between life and death:

> Upon earth, in the midst of the darkest night, light never abdicates its functions altogether. It is still subtle and diffusive, but whatever little there may be, the eye still catches that little. Here there was not an atom; the total darkness made me totally blind (p. 265).

Hidden deep under the earth, Axel's reliance on fragile artificial light makes the darkness even more pressing. Unlike darkness on the surface, which is never true absence of light as light never 'abdicates its functions altogether', the pressing blackness that 'blinds' Axel is made more omnipresent through the stark contrast of

[433] Stephen Lilley, *Transhumanism and Society: The Social Debate over Human Enhancement* (New York: Springer Books, 2013) p. 5.

the absoluteness of electric light. The encroaching darkness and the dimming lamp make him 'lose [his] head' (p. 265); he 'watched it in trembling anxiety; I drank it in as if I could preserve it, concentrating upon it with the full power of my eyes, as upon the very last sensation of light which they were ever to experience' (p. 265). Axel's lamp is not instantly snuffed like a candle, nor can it burn out like a gas lamp, but instead slowly fades as the current ceases to course through its coil, serving to create the tension between its light and absolute darkness, and further embellish the fragility of binary states of life and death.

Electric light is also important to exploration and human advancement in *20,000 Leagues under the Sea.* The story focuses on a trio of adventurers and the crew of a submarine exploring an area of the globe that would be otherwise impassable were it not for electric light and power. The Nautilus submarine, bathed in the glow of its own electric lights, is described as a 'supernatural apparition'.[434] The Nautilus transcends human order and laws, as Captain Nemo uses it to perform the inhuman task of living and exploring beneath the ocean. When this story's adventurers chase the Nautilus, what they believe to be a 'gigantic narwhal, and an electric one' (p. 525), Verne continually emphasises the contrast between darkness, natural light, and the electric light of the Nautilus. In a similar means to *Journey to the Centre of the Earth,* Verne's concentration on the differences between types of illumination make the electric more omnipresent and new. The darkness on the sea is 'profound' (p. 524) and 'intense' (p. 530). The intensity of the darkness, and the serene natural light of the moon and stars, which 'reanimated' the adventurers with its 'kindly' light (p. 530) creates a lighting contrast with the stark, clinical nature of the electric light of the submarine.

When the group are taken inside the vessel, the electric light emphasises the surreal environment they find themselves in. Professor Aronnax remarks how after being in darkness for half an hour:

> Our prison was suddenly lighted – that is to say, it became filled with a luminous matter, so strong that I could not bear it at first. In its whiteness and intensity I recognised that electric light which played round the submarine boat like a magnificent phenomenon of phosphorescence (p. 533).

[434] Jules Verne, *20,000 Leagues Under the Sea,* trans. William Lackland in *Jules Verne: Seven Novels* (New York: Barnes & Noble, 2006) p. 509. All further references to this text will be given in the main body of work unless otherwise footnoted.

The electric light is in this instance portrayed as otherworldly; something fluid that fills the chamber with a 'luminous matter'. The description of 'phosphorescence' plays with ideas of the natural and unnatural, and suggests that the electric light in the submarine blurs notions of inside and outside. While the *Nautilus* itself may be the most obvious novum of this story, a posthuman extension of Nemo's exploratory spirit, the electric light is similarly influential and improbable at the same time. Electric light is unusual to see in such a space, especially underwater, something that Aronnax finds disconcerting, yet also reassuring as he is able to scientifically rationalise his perceptions of the glow.

In the close quarters of the submarine, electric light is overwhelming. When the three men are brought food, Aronnax notes 'undoubtedly we had to do with civilised people, had it not been for the electric light which flooded us, I could have fancied I was in the dining-room of the Adelphi Hotel at Liverpool, or at the Grand Hotel in Paris' (p. 535). Electric light does not provide the same warmth as gaslight, and so was not deemed appropriate for such spaces. As Robert Louis Stevenson comments, 'To look at it [electric light] only once is to fall in love with gas, which gives a warm domestic radiance fit to eat by'.[435] In 1870, the final year of the novel's serialisation, electric light in such public spaces was still in its experimental phase, with most establishments still lit by gas. Similarly, Verne describes how the light illuminates Captain Nemo's library: 'The electric light flooded everything; it was shed from four unpolished globes half sunk into the volutes of the ceiling. I looked with real admiration at this room, so ingeniously fitted up, and I could scarcely believe my eyes' (p. 542). While Aronnax's response to the light of the library is clearly more positive than his initial reaction to the electric light, his language belies that he is still overwhelmed; it has 'flooded' the library, everything is cast under its glare in a way that makes the Professor doubt what he is witnessing. While the professor is in awe of the light, it still lacks the warmth of gas, and seems detached and stark in comparison.

Though overwhelming at first, once its use changes from illuminating the domestic (or as domestic as a submarine can get) to spreading its light outwards in exploration, Aronnax begins to understand its worth. Once it is used to illuminate the unknown, similarly to Verne's vision of electric light as powerfully explorative in *A*

[435] Robert Louis Stevenson, 'A Plea for Gas Lamps' in *Virginibus Puerisque,* p. 255.

Journey to the Center of the Earth, it becomes associated with human advancement and the progress of knowledge:

> The liquid mass appeared vividly lit up by the electric gleam […] The sea was distinctly visible for a mile all around the Nautilus. What a spectacle! What pen can describe it? Who could paint the effects of light through those transparent sheets of water, and the softness of the successive graduations from the lower to the superior strata of the ocean? (p. 534).

Verne emphasises the 'spectacle' that electric light creates through its exposure of the previously invisible. Electric light *was* the spectacle. Whereas gaslight and its predecessors were able to make spectacle of things by casting their glare on them, electric light was much more powerful in its illuminatory efficacy. Verne himself witnessed the power of the spectacle of electricity in his visit to the 1867 Paris International Exposition,[436] further reinforcing his intention to use electricity after he wrote in 1866: 'I'm also preparing our *Journey Under the Waters,* and my brother and I are arranging all the mechanics needed for the expedition. I think we'll use electricity.'[437] The latest technologies of electric light were exhibited at the 1867 Paris International Exposition, as well as a number of the latest submarines. An American account of the Exposition described the electric light at the show: The light is 'dazzling in its brilliancy, and possesses the whiteness of the solar light […] The electric light is of this character'.[438] The Commissioner's report describes electric light in very similar terms to Verne's 'gleam' of electric light, as they both emphasise the power of the light and compare it to solar light. The water softens the harshness of electric illumination and elevates its glow to an almost artistic quality; it is no longer overwhelmingly bright, but instead spreads its intensity over a much less focused area than where the adventurers were held when they first boarded the submarine.

The men of the submarine use electric light to hunt and gather beyond the confines of the vessel. In Chapter XIV, Verne yet again employs the 'Ruhmkorff Apparatus' to enable his heroes' explorations into the unknown. As Nemo, his assistant, Aronnax, and Conseil make their descent into the aquatic forest, Aronnax remarks on the intensity of the darkness at such a depth:

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[436] William Butcher, *Jules Verne: The Definitive Biography* (New York: Avalon, 2006) p. 222.
[437] Verne's Diary, 10th August 1866 quoted in William Butcher, *Jules Verne: The Definitive Biography,* p. 222.
[438] *Reports of the United States Commissioners to the Paris Universal Exposition, 1867, vol. III* ed. William P. Blake (Washington: Government Printing Office, 1870) p. 422.

> [E]ven in the clearest waters the solar rays could not penetrate further. And accordingly the darkness deepened. At ten paces not an object was visible. I was groping my way, when suddenly I saw a brilliant white light. Captain Nemo had just put his electric apparatus into use; his companion did the same, and Conseil and I followed their example (p. 565).

In Verne's Extraordinary Voyages, electric light is consistently seen in a much more positive way if it is illuminating progress and exploratory endeavour. It should not be the light of the social space. It 'floods' the Nautilus's library, and overwhelms in the enclosed spaces of the submarine. Instead, Verne envisions its power and bright illumination as a tool for exploration and the expansion of human knowledge. When presented in other more social circumstances in Verne's work, electric light becomes authoritarian and disturbing.

Verne's 'Demon of Electricity'

Verne's extraordinary voyages fit into the posthuman discourse of 'history as a confident progress narrative, recruiting technology to an uncomplicated story of evolutionary ascension'.[439] Verne's electric lights largely looked to the future, yet when they were static in their position and in what they lit, there was a sense of pessimism that underscored his technophilia.

To most accurately illustrate this idea, it is imperative to consider Verne's 'lost novel', *Paris in the Twentieth Century.* Written in 1863 but not published until 1994, Verne's editor at the time, Pierre-Jules Hetzel, suggested that he indefinitely delay the publication of the novel, due to its pessimism regarding future technologies and society. Verne's image of 1963 Paris was founded on the notion that 'Monopoly, that *ne plus ultra* of perfection, held the entire country within its talons'.[440] Business and economy dictates the overall hegemony of culture and society in Verne's relatively dystopian vision of Parisian society 100 years in his future. Eugen Weber's introduction to the story correlates new advances in capitalism with the burgeoning electric lights of the city: 'The material setting is prescient and prophetic […] There are electric lights in profusion; boulevards and department stores lit as brightly as the

[439] Sara Wasson and Emily Alder, *Gothic Science Fiction: 1980-2010* (Liverpool: Liverpool University Press, 2011) p. 12.
[440] Jules Verne, *Paris in the Twentieth Century,* trans. Richard Howard (New York: Random House, 1996) p. 3. All further references to this text will be given in the main body of work unless otherwise footnoted.

sun.'[441] The fin-de-siècle shift of the general conception of capitalism away from something alienating to a collective culture – something where the 'mass' could guarantee individual development rather than erasing the need for it - had not developed yet at Verne's time of writing. Instead, Verne presents a Paris that isolates the individual, akin to Marx's vision of a society that alienates the individual within the capitalist network. It is very similar to Zola's contemporary Paris, which was dictated by capitalist desire and different types of connected infrastructure. Bertell Ollman suggests that Marx's ideas of alienation affect anyone within capitalist society, regardless of class, and that 'By producing alienated material objects and, in the process, themselves as an alienated class, the proletariat can be said to produce the alienation of people with whom they and their products have relations'.[442] Electric light was a product, an object 'outside us', a commodity, and in Verne's vision of twentieth-century Paris, it has an alienating effect on Michel, the protagonist, as control of his life is taken away from him.

In Verne's Paris of 1963:

> [C]rowds filled the streets; night was beginning to fall, and the luxury shops projected far out onto the sidewalks the brilliant patches of their electric light; streetlamps operated by the Way System – sending a positive electric charge through a thread of mercury – spread an incomparable radiance; they were connected by means of underground wires; at one and the same moment, the hundred thousand streetlamps of Paris came on. Nonetheless a few old-fashioned shops remained faithful to the old means of hydrocarbonated gas (p. 24).

His image of the hyper-modern Paris places emphasis on 'luxury' shops and consumerism and the contrast that emerges between them and the 'old-fashioned shops'. The electric lights illuminate pavements as their visual reach extends far beyond the shops' physical boundaries, ensnaring passersby. The idea of a few remaining 'faithful' to the old gaslights is interesting, as it suggests electric light is a betrayal or lack of faith. The image of Stevenson's 'sedate electrician' switching on all of the electric lights at once reflects in Verne's electric lights flashing into being 'at one and the same moment'. Verne creates a mechanised society, where technology and consumerism dictate the processes of life more than ever before.

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[441] 'Introduction' Eugen Weber, in Jules Verne, *Paris in the Twentieth Century,* trans. Richard Howard (New York: Random House, 1996) p. xii.
[442] Bertell Olman*, Alienation: Marx's Conception of Man in a Capitalist Society* (Cambridge: Cambridge University Press, 1971) p. 153.

The vision of modern Paris Verne creates is similar to the image of the future *Ladies' Paradise* in Zola's novel. Zola's department store also takes some artistic license with the presence of electric light, as he lights his 1860s shop with electricity even though its use did not extend into such places until around 1880. Instead, his use of electric light creates an image of distinct modernity as he describes how the light:

> [S]hed a white brightness of blinding fixity, like the reflection of some colourless star, which was killing the dusk. Then, when all the lamps were lit, there was a rapturous murmur from the crowd; the great display of white took on fairy-like splendour beneath this new-lighting. It seemed as if the colossal orgy of white was burning too, itself becoming changed into light. The song of white was taking wing in the blazing whiteness of a dawn.[443]

Both authors emphasise the modernity of electric light, and the associations it holds with extended consumerist time. It is the ultra modern, a kind of fantasy world of white starkness. Both authors compare the electric light to a star, Zola writing of a 'white brightness of blinding fixity, like the reflection of a colourless star', and Verne exclaiming 'What would our ancestors have said upon seeing these boulevards lit as brightly as by the sun?' (p. 26). While Zola had previously described gaslights in reference to stars, electric light now replaces both gas and stars with 'blinding' 'white brightness' as harsh as the sun. Its gaze is wide and authoritative, its widespread illumination a threat to individual autonomy as much as to the dusk it kills. Electric light in this context dehumanises the individual and their autonomy within mass society, or in Zola's description a 'crowd' entranced by the 'colossal orgy' of consumerist goods. These associations of electric light and repressive capitalism contrast greatly with Verne's positive posthuman ideas of how it interacts with human enlightenment. Verne's technological pessimism suggests Kevin LaGrandeur's definition of posthumanism as portraying 'systems comprised of, and entangled with, other systems'.[444] The future Paris is made of entwined, dehumanising, networks of power, light and people. What Verne imagines, and what Zola envisions in his future Ladies' Paradise, suggests the next evolution of Baudrillard's simulacra. As discussed previously, gaslight helped to create an image of the city that adhered to the first three stages of the *image*. Yet the fourth stage, that of having 'no relation to any reality whatsoever',[445] is approached by Verne's images of the city's future. It is an

[443] Emile Zola, *The Ladies' Paradise,* p. 426.
[444] Kevin LaGrandeur, 'What is the Difference Between Posthumanism and Transhumanism?' (July, 2014) from http://ieet.org/index.php/IEET/more/lagrandeur20140729 [accessed on 9/11/15]
[445] Jean Baudrillard, *Simulacra and Simulation,* p. 6.

imaginary place where fictional constructs of the relationship between society and technology have replaced any sense of reality in a way that emphasises the alienation of the individual within concepts of modernity.

Similarly, in his short story 'Dr. Ox's Experiment', Verne describes the town of Quiquendone, where the titular Dr. Ox conducts a test regarding the effect of networked artificial light on the population of the town. Verne creates a new system of lighting, one that uses an electric current to produce a 'remarkably brilliant flame […] the light of which would rival the electric light'.[446] Verne's artificial lighting is entirely fictional, yet imbues the qualities of gaslight with the brightness and power of electric light through the use of an electric current; William Pène du Bois includes an illustration that shows how gas and electric are used together to create the lighting system.[447] The combination of gas and electric light is intended to keep the people of the town safe at night, and to deter any potential affray in the darkness. However, Ox's experiment affected the 'individual' within the town: 'if the inhabitants of Quiquendone did not change in their home life, they were visibly metamorphosed in their social and common existence, in regard to the relations of individual with individual.'[448] They are likened to 'dogs' and 'frogs' that are to be 'vivisected' by Dr. Ox's experiment.[449] The illumination provides 'no intermission in the delirium; but a permanent inflammation, which would inevitably bring the Quiquendonians into collision with each other'.[450] The networking of society through infrastructures of light brought people together in a way that eschewed privacy and individual agency, Verne's story acting as a warning of the negative potential of such advances. Verne warns of what happens when 'all the laws of nature seemed to be overturned', in this case the order of day and night, as he describes the changed passions and desires of the town. The people become consumed by their enflamed desires: 'All those Quiquendonians, so sober before, whose chief food had been whipped creams, committed wild excesses in their eating and drinking. Their usual regimen no longer sufficed.'[451] The electric-gas lamps that illuminate the town have driven the people to alter their usual patterns of life, and consume more and more, a science-fiction

[446] Jules Verne, *Dr. Ox's Experiment* (New York: MacMillan, 1963) p. 26.
[447] Jules Verne, *Dr. Ox's Experiment,* p. 26
[448] Jules Verne, *Dr. Ox's Experiment,* p. 50.
[449] Jules Verne, *Dr. Ox's Experiment,* p. 27.
[450] Jules Verne, *Dr. Ox's Experiment,* p. 51.
[451] Jules Verne, *Dr. Ox's Experiment,* p. 58.

version of Zola's social examinations of the effect of expanded leisure time on gas-lit Paris.

Verne criticises electric light in a much more explicit way in Chapter XVI of *Paris in the Twentieth Century*, which is entitled 'The Demon of Electricity' – the title itself conjuring a very different message to his amazing electrically propelled adventures. As Michel walks through Paris, disillusioned with a life of monotony caused by the government-controlled art and culture movements, he enters Notre-Dame Cathedral:

> Leaving the darkness of the streets, Michel was dazzled: the altar shone with electric light, and beams from the same source escaped the monstrance raised in the priest's hand. "More electricity!" the miserable boy exclaimed, "even here!"(p. 207).

That electric light enters the 'monstrance', the receptacle for the body of Christ in Catholic mass, is particularly significant, as it suggests that electric light takes the place of redeemer. It holds ultimate power through its vision and glare. The extending grasp of electricity, over the arts, culture and now even religion, acts as a metaphor for the networking of society into one mass that troubled Verne's hopeful image of the modern. Michel's boss at the Entrepot Dramatique, a government agency which controls the theatre in Paris, succinctly summarises this: "We are not concerned with novelty here; all personality must be dispensed with; you will have to blend into a cast ensemble, which produces collective works of an average appeal" (p. 177). By assimilating everything, creativity and originality for example, into a network, the role of individuality and independent agency is eschewed and erased. The demon of electricity is pursuing Michel, imploring him to accommodate himself into this network of mediocrity. It is the omnipresent symbol of the new modern world, casting everything it lights under scrutiny.

Walking towards the graveyard where he passes out alone at the story's denouement, Michel is overwhelmed by the light of the boulevards: 'The lampposts relayed their cones of intense white light, and transparent signs on which electricity inscribed advertisements in letters of fire glistened on the rostral columns' (p. 208). All of the lights are blinding to Michel, the whiteness too intense for his senses. Michel's last experience of the Paris streets is reminiscent of McLuhan's notion of electric light as a medium without a message; it is so overwhelming and powerful, that all that may be experienced is a sense of stark whiteness. *Paris in the Twentieth*

Century is perhaps the most prophetic of all of his Science Fiction writing; it anticipates the future unease surrounding mass networked societies that fed H.G. Wells's technological scepticism. To Verne, electric light is a source of individual inspiration and when used so is to be commended, yet when utilised in a networked sense or situated in a more social environment it becomes a light that blinds more than it illuminates.

4.3 The Transient Light of H.G. Wells's Fin-de-Siècle

In the decades that followed Verne's reign over Science Fiction's literary landscape, the genre, and electric light, started to mature together in a rapidly changing world. Nicholas Ruddick cites H.G. Wells as the writer who produced 'the most significant contribution […] to fin-de-siècle fantastic fiction'.[452] Wells's stories deal with the concepts of utopia (and dystopia), degeneration and technology, these themes often intertwining in his texts in a criticism of the uncertain changes the world was going through at the beginning of the twentieth century. Writing on *The Time Machine,* Justin E.A. Busch succinctly encapsulates Wells's overarching thematic tendencies:

> Bound by the best science of his day, Wells projected his vision a much shorter distance into the future than would now be required, but its message remains untouched: humanity is subject to the same laws of decay and dissolution as the rest of the universe; there is no escaping the destiny of decadence and extinction.[453]

The movement from Vernian hopefulness for the future – exempting *Paris in the Twentieth Century* – into Wells's pessimism was exemplified in his different use of technology. Wells turned the powerful force of technology back towards its creators, and exhibited worlds where the imperial nature of networked power and technology subjected society to authoritarian control. In Wells's fiction, technology is most often a colonising force that confuses natural order and places humanity under its subservience.

Wells, describing his experience at the Niagara Falls Power Station in 1906, wrote that:

> The dynamos and turbines of the Niagara Falls Power Company for example, impressed me far more profoundly than the Cave of the Winds; are indeed, to my mind, greater and more beautiful than that accidental eddying of air beside a downpour. They are will made visible, thought translated into easy and commanding things. They are clean, noiseless, and starkly powerful. All the chatter and tumult of the early age of machinery is past and gone here; there is no smoke, no coal grit, no dirt at all. The wheel-pit […] has an almost cloistered quiet about its softly humming turbines […] The dazzling clean switch board, with its little handles and levers, is the seat of empire over more power than the strength of a million, disciplined, unquestioning men.[454]

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[452] Nicholas Ruddick, 'The Fantastic Fiction of the Fin de Siecle' in *The Cambridge Companion to the Fin de Siecle,* ed. Gail Marshall (Cambridge: Cambridge University Press, 2007) p. 198.
[453] Justin E.A. Busch, *The Utopian Vision of H.G. Wells* (Jefferson: McFarland and Company inc., 2009) pp. 1-2.
[454] H.G. Wells, 'The Future in America' in *Harper's Weekly,* July 21st 1906, p. 1019.

Wells's account of this monument to electric power unarguably resonates with awe, yet his amazement is tinged with disbelief that grows into a kind of uncanny concern with the power it holds. He sees the structure as 'will made visible', a symbol of mankind's technological progress and harnessing of nature. To Wells, the turbines and dynamos are 'thought translated into easy and commanding things' – there is a mindlessness to these dynamos, the adjective 'commanding' suggesting a further sense of the power they hold over man. Wells's most overt moment of unease regarding the powerful new technology occurs as he describes the 'dazzling clean switchboard' as 'the seat of empire,' further suggesting that the turbines hold more power than 'a million, disciplined, unquestioning men'. He describes the power station as an imperial force, recognising that such power placed under the control of one dazzling switchboard is both awe-inspiring and terrifying at the same time.

During this period, Wells's thinking was distinctly socialist, suggesting an element of political criticism to his view of electric power as imperialist. Matthew Taunton summarises Wells's socialist reasoning into the questions: 'How could politics and society be made to catch up with the advances of science and technology? How could social and political institutions become more scientific – which for Wells always meant more efficient and ordered?'[455] In the turbines and dynamos of Niagara Falls, Wells saw a reflection of the society that was forming around him; a rigidly structured system, akin to a machine, or a network of electric power. This fear suggests Marshall McLuhan's identification of the anxiety surrounding networked electric technology:

> With the arrival of electric technology, man extended, or set outside himself, a live model of the central nervous system itself. To the degree that this is so, it is a development that suggests a desperate and suicidal autoamputation, as if the central nervous system could no longer depend on the physical organs to be protective buffers against the slings and arrows of outrageous mechanism.[456]

Wells's fiction reflects the growing anxiety surrounding networked electrical systems that arose around the uncertain times of the Fin-de-Siècle period. Within his texts it acts as a restrictive field around humanity, as he emphasises the potential effects of being so contained within a 'nervous system' of technology.

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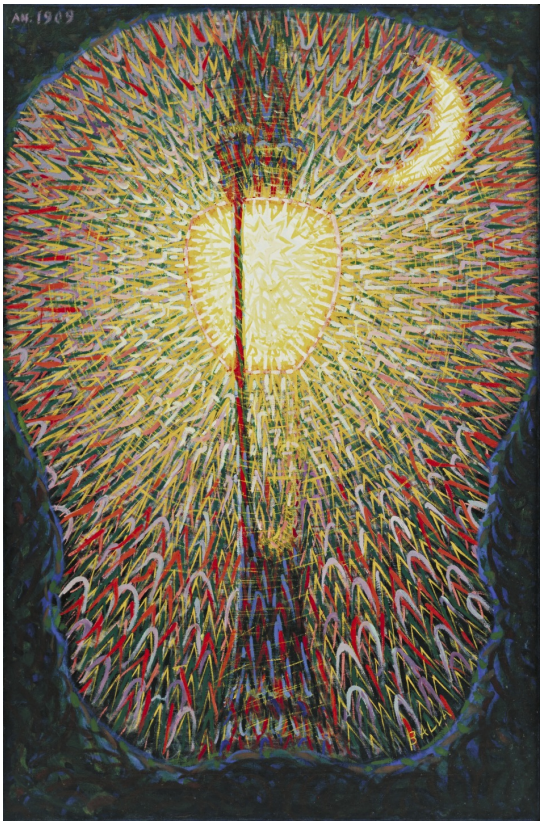
[455] Matthew Taunton, 'H.G. Wells's Politics' 2009, from http://www.bl.uk/romantics-and-victorians/articles/h-g-wells-politics [accessed on 14/5/15]
[456] Marshall McLuhan, *Understanding Media,* p. 43.

During the 1890s, a period when Wells published *The Time Machine* (1895), *The War of the Worlds* (1898) and *When the Sleeper Wakes* (1899, but reworked into *The Sleeper Awakes* with minimal changes and published in 1910), electricity and its light became far more *real.* It was not just the technology of Vernian science fiction any more, but was growing into a much more practical form of lighting. The perfection of the light bulb, and the opening of central electricity stations, in London and New York in 1882, for example, meant that electric light became a much more accessible form of illumination. While people still used gaslight, candles and firelight at the turn of the century, the last few decades were when electric light was perfected and began to grow into the illumination that would persist for over one hundred years and counting. Electric light, which had at first been blinding in its whiteness, and in 1881 was 'so expensive that it could only be construed as a luxury affordable by the upper-middle classes and aristocracy',[457] had by the late 1890s become accessible to the majority of society, in both a domestic and public sense. Laura Ludtke and Jane Brox establish that electric light was embraced by some as a symbol of the modern and an inevitable sign of technological progress. Brox highlights futurist Italian poet Fillipo Marinetti's 'Against Passéist Venice' as an example of electric light's perceived modernity. Marinetti extolled the value of the light: 'Let the reign of divine Electric Light finally come to liberate Venice from its venal moonlight.'[458] The corruption and decadence of the 'venal' natural light could be cured by the clean, divine light of electricity that would 'liberate' Venice. Similarly, Giacomo Balla's 1909 painting 'Street Light' offers an image of electric light's dominance over natural light as the moon pales into obscurity when set against the incandescent radiance of an electric arc lamp.

[457] Graeme Gooday, *Domesticating Electricity* (London: Pickering and Chatto, 2008) p. 153
[458] F.T. Marinelli 'Against Passéist Venice' 27 April 1910 in *Futurism: An Anthology* ed. Lawrence Rainey, Christine Poggi, Laura Whitman (New Haven: Yale, 2009)



Giacomo Balla, 'Street Light', 1909.

The electrification of light was greeted with a decidedly mixed reception during the later years of the nineteenth century. As its presence became more obvious in reality, it gained praise from the likes of Marinetti, who saw in it a liberated future, yet was also treated with trepidation by writers such as Robert Louis Stevenson, who criticised the faceless nature of electric light in 'A Plea for Gas Lamps.' The post-industrial West was in a state of rapid transition during this period - not only in terms of its lighting - as it entered true modernity.

Economic and corporate growth was rapid during the years approaching the twentieth century; people were becoming wholly better connected through communication innovations and society began to appear markedly different to what it had been for a large part of past century. H.G. Wells acknowledges this in his short story 'The Diamond Maker', and encapsulates the progression of modernity in a description of the lights of London. Describing the Embankment, which was one of the first areas to be electrically lit, he emphasises the contrast that was developing:

> Beyond comparison the night is the best time for this place; a merciful darkness hides the dirt of the waters, and the lights of this transition age, red, glaring orange, gas-yellow, and electric-white, are set in shadowy outlines of every possible shade between grey and deep purple.[459]

[459] H.G. Wells 'The Diamond Maker' in *H.G. Wells: The Complete Short Story Omnibus* (London: Gollancz, 2011) p. 48

In this 'transition age', the various lights that illuminate the Thames reflect the uncertainty of the turn of the century period. Perceptions were incredibly mixed in this environment, as different lights suggested different associations all within a limited field of view. Electric light stands out in Wells's portrayal as 'white', each other light source is a shade of yellowy-red, but electric light is unmistakably new and different. Wells imagines worlds where electric light is undoubtedly a sign of modernity, something that creates an idealised form of an ever-active society, yet within these situations, electric light is also emphasised as controlling and repressive. Paul Alkon suggests Wells strove to show his readers 'the possibility of a technologically advanced civilisation – to create a fundamental shift in political perspective whereby readers are shown what it is like to be on the receiving end of an imperial enterprise'.[460] Alkon's summary of Wells's notion of imperial enterprise reflect his reaction to the Niagara Falls Power Plant, as well as suggesting the potential of his works to turn the gaze of electric light upon the rapidly-evolving elements of his contemporary society.

The War of the Worlds and the image of the 'Sun Tower'

The War of the Worlds presents Wells's technological apprehensiveness in a way that suggests the surveillant possibility of electric light. Travelling home with his wife, the narrator describes how:

> [F]rom the railway station in the distance came the sound of shunting trains, ringing and rumbling, softened almost into melody by the distance. My wife pointed out to me the brightness of the red, green, and yellow signal lights hanging in a framework against the sky. It seemed so safe and tranquil.[461]

The railway station, with its distant rumbling and noise, and the signal lights of the rail tracks, which would have been electric at this point,[462] act metonymically for the rapidity and growth of technological change during this period. The colours of the signal lights, indicating all three states of motion – red, yellow, green – suggest the

[460] Paul Alkon, *Science Fiction before 1900: Imagination discovers Technology* p. 48
[461] H.G. Wells *The War of the Worlds* (London: Penguin, 2005) p. 12. All further references will be given in main body of text unless otherwise footnoted.
[462] 'At the end of the 19th century, with the spread of bright electrical illumination, a movement began to replace white by the more distinctive green for Safety. This change happened by about 1890 in Britain […]' taken from 'Early Railway Signals' from http://mysite.du.edu/~etuttle/rail/sigs.htm [accessed on 4/11/14]

ambiguity of this transition age. The uncertain state of the lights is further emphasised by how it only 'seemed' safe and tranquil; the verb implying a transition from a state of safety to something else and a retrospective awareness. The signal lights of the station are seen as 'hanging in a framework against the sky', which again conjures images of interconnectedness and the usurping of natural order as manmade lights replace the stars.

The Martian tripods, symbols of technological other, are also uncannily similar to certain types of nineteenth-century lighting technology. The narrator remarks that the machines operated when 'traversed with a current of electricity' (p. 130), describing their heat rays as 'the ghost of a beam of light' (p. 26). It is electric light stripped down to pure energy. The narrator likens it to a lighthouse, describing the ray's operation as he states: 'This intense heat they project in a parallel beam against any object they choose by means of a polished parabolic mirror of unknown composition, much as the parabolic mirror of a lighthouse projects a beam of light' (p. 28). Lighthouses were electrified during the latter half of the nineteenth century thanks to the efforts of Michael Faraday[463] - electric light being first implemented in Dungeness Lighthouse in 1862.[464] The depiction of the tripods as tall, light emitting (albeit invisibly) machines that use a parabolic mirror similar to a lighthouse is reminiscent of the Sun Towers, occasionally called Moon Towers, that were installed or proposed in a range of nineteenth-century cities.

[463] Denis Smith, *Civil Engineering Heritage: London and the Thames Valley* (London: Insitution of Civil Engineers, 2001) p. 198.
[464] Thomas Stevenson, *Lighthouse Construction and Illumination* (Cambridge: Cambridge University Press, 2010) p. 178.

Illustration of an American Lighting Tower in San José, California, 1885.

Sun Towers were electric arc lamps placed on a high tower, the intention of which was to create an artificial sun that would solve the issue of electric arcs' brightness due to its height, and illuminate a massive area at night. Paul Bogard notes the proposed plans to create a sun tower in Paris for the 1889 Paris Exposition that would have stood near Pont Neuf in the city's centre and have draped the whole city in incandescent artificial light.[465] However, this plan was turned down in favour of Gustave Eiffel's design, which was also at one stage considered to have arc lights installed on it. Even though it did not come to fruition, Wolfgang Schivelbusch suggests 'the fact that Eiffel, too, considered putting an arc lighting system on top of his tower shows how attractive the idea was'.[466] Few sun towers were actually put into practice in Europe, with most in America; Detroit became the first town to be entirely lit at night by tower light in 1888.[467] It was not particularly successful, yet it was the idea that was the most prevailing thing about them, of breaking the bounds of day and night, and light's return to a panoptic principle of one central source of light that could both illuminate and open the public to scrutiny. Susanna Oliveira argues that the use of sun lamps, mostly for celebratory and military purposes, and the subsequent discontent with such an authoritarian light source, meant that the 'Eighteenth century dream in which night could be as bright as day was soon replaced by the nightmare of an all-pervading light from which there was no escape,' further

[465] Paul Bogard, *The End of Night* (London: Fourth Estate, 2013) p. 21.
[466] Wolfgang Schivelbusch, *Disenchanted Night,* p. 128.
[467] Fred H. Whipple, *Municipal Lighting* (Detroit, 1888) p. 157.

adding that 'some years later it was abandoned and its towers of light sent off to the literary imaginary, to H.G. Wells's negative utopias, to Albert Robida's optimism, and, of course, to Jules Verne's visions'.[468] In fact, an electrical transmission tower constructed by Nikola Tesla in 1901 was described by *The Eagle* as 'standing like one of the fabled Martian giants, from H. G. Wells's tale of the *War of the Worlds*'.[469]

Sun Towers encouraged associations between electric light and power; their positioning as an omniscient eye cultivated the vision of electric light as authoritarian. Contemporary accounts describe the system of tower lighting in Detroit as 'more spectacular than efficient',[470] and many were sceptical that this form of lighting could be successful, even more so after animals who were unaccustomed to such a powerful source of light at night began to die from exhaustion after they could not sleep in the glare.[471] The solidification of electric light's position in the public eye meant that the hole-punched darkness of gas lighting was fading away, replaced by 'the first type of lighting that could truly be mentioned in the same sentence as the sun'.[472] These tall electric lamps were Foucault's definition of Panoptic power envisioned in light. The towers' light 'induce[d] the inmate into a state of conscious and permanent visibility that assure[d] the automatic functioning of power.'[473] Through making the night into a false day, via a tool as tall, powerful and all-seeing as the sun tower, citizens at night may be policed and regulated through their containment within a visible field and the threat of constant observation. It may also be observed as creating another of Foucault's conditions of Heterotopia, as the electric sun towers 'create an absolute break with their traditional time'.[474] The sun towers reconstitute reality into something not dictated by time, a reimagined social space. We may see these ideas in Wells's treatment of electric light in *The War of the Worlds'* London. The artilleryman tells the narrator:

> "One night last week," he said, "Some fools got the electric light in order, and there was all Regent's Street and the Circus ablaze, crowded with painted and

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[468] Susana Oliveira, 'New Light and Old Shadows: Industrial Illumination and its Imaginaire' in *Electric Affinities: Testing Word and Image Relationships,* ed. Catriona McLeod, Veronique Plesch, Charlotte Schoell-Glass (New York: Rodopi, 2009) p. 246.
[469] *The Eagle,* 1916, quoted in A.J. Morton, 'Nikola Tesla: The Scottish Connection' from http://www.teslasociety.com/teslascottishconnection.htm [accessed on 12/3/15]
[470] Wolfgang Schivelbusch, *Disenchanted Night,* p. 127.
[471] Megan Garber, 'Tower of Light: When Electricity was new, people used it to mimic the moon' (March 6, 2013) from http://www.theatlantic.com/technology/archive/2013/03/tower-of-light-when-electricity-was-new-people-used-it-to-mimic-the-moon/273445/ [accessed on 3/3/15]
[472] Paul Bogard, *The End of Night,* p. 21.
[473] Michel Foucault, *Discipline and Punish,* p. 201.
[474] Michel Foucault, 'Of Other Spaces: Utopias and Heterotopias', p. 6.

> ragged drunkards, men and women, dancing and shouting till dawn. A man who was there told me. And as the day came they became aware of a fighting-machine standing near by the Langham and looking down at them. Heaven knows how long he had been there. It must have given some of them a nasty turn. He came down the road towards them, and picked up nearly a hundred too drunk or frightened to run away" (p. 160).

Here we have the threat of observation through illumination; the electric light not only illuminates, but blinds the public to the threat that may lie beyond in the darkness. In this instance, the electric light highlights the depravity of society, as ragged drunken people dance under its light, capturing them within a field of vision. The glare of the lights mean the darkness beyond, and the threat of the Martian war machine lurking on the periphery of vision, is invisible. The Panoptic values of the Martian War Machine standing tall outside of the field of light is not the only Foucauldian connotation that may be drawn from this passage. The line of text following the artilleryman's story, a single line offset in its own paragraph, reads 'Grotesque gleam of a time no history will ever fully describe!' (p. 160). The 'Grotesque gleam' seems to be a direct reference to the power of electric light, and the stark realities of life that it exposes. It is also a similar concept to Foucault's notion of the 'modern episteme', described as the post-classical period where human sciences 'speak only within the element of the representable, but in accordance with a conscious/unconscious dimension, a dimension that becomes more and more marked as one attempts to bring the order of systems, rules and norms to light'.[475] John Macgregor Wise elaborates on what Foucault means by this as he suggests that 'The notion of causation in the modern episteme usually gives rise to the question of control, be it the uses of technology to control time or the control of humans by their technology'.[476] The narrator's description of the post-invasion world aligns with the conception of the modern episteme as something that questions the relationship of technology with humanity. It appears that Wells's fin-de-siècle literature suffered from an awareness of this modern episteme, Foucault's idea becoming focused and miniaturised into a kind of *micro episteme* in his works, where the systems of technology and authority caused deep anxieties with their relationship with the human. Also, compare the depiction of the 'grotesque gleam' to an earlier portrayal of gas in the novel, where,

[475] Michel Foucault, *The Order of Things* (London: Routledge, 2002) p. 396.
[476] John Macgregor Wise, *Exploring Technological and Social Space* (California: Sage Publications, 1997) p. 5.

even in the midst of the alien invasion, 'along the edge of Regent's Park there were as many silent couples 'walking out' together under the scattered gas lamps as ever there had been' (p. 80). Gaslight is 'scattered', its light picking holes in darkness as opposed to creating a blindingly false day. It is not as solid or controlling as electric light, and speaks more for intimacy and romance than electric light's starkness.

Electric Authority in *The Sleeper Awakes*

Wells's representation of electric light in *The War of the Worlds* may be seen to evolve into a more explicit criticism in *The Sleeper Awakes,* which postulates the posthuman role of electric light in a supposedly utopian future. The story focuses on an insomniac named Graham, who falls into a trance-like sleep on the Cornish coast in the late nineteenth century only to awake 203 years into the future as owner and master of all Earth following inflated interest on his accounts and a number of financial bequests.

Awakening to two centuries' worth of technological, architectural and social development, Graham's first impression of the new, future London is of:

> [O]verwhelming architecture. The place into which he looked was an aisle of Titanic buildings, curving spaciously in either direction. Overhead mighty cantilevers sprang together across the huge width of the place, and a tracery of translucent material shut out the sky. Gigantic globes of cool white light shamed the pale sunbeams that filtered down through the girders and wires.[477]

In this future world, technology and industry continued on the trajectory set by the rapid industrialisation of the nineteenth century. Electric light develops into a technology that unites night and day. The electric whiteness 'shames' the sun, meaning that even during the day electric light holds sway over this ultra-modern London; day and night have been placed under the same governable order. When taken through the city upon his awakening, Graham ponders this idea: 'he had observed no windows at all. Had there been windows? There were windows on the street indeed, but were they for light? Or was the whole city lit day and night for everyone, so there was no night there?' (p. 55). The light is psychologically oppressive, the lack of windows heightening the sense of claustrophobia. The whole

[477] H.G. Wells, *The Sleeper Awakes* (London: Penguin, 2005) p. 42. All further references will be given in main body of text unless otherwise footnoted.

city is constantly lit 'for everyone,' the lighting system suggesting the state of extreme totalitarianism that now dominates London. Everyone is the same, and under the authority and observation of the central power that governs the city. Wells later directly addresses the dearth of socialism in his new London as Graham 'thought of Bellamy, the hero of whose Socialistic Utopia had so oddly anticipated this actual experience' (p. 59). Wells refers here to Edward Bellamy's *Looking Backward: 2000-1887,* an 1888 novel that attempts to predict the effects of technological and commercial growth on future America, which he also lit electrically. Bellamy notes in the novel: 'Electricity, of course, takes the place of all fires and lighting'.[478] However, Wells's image of twenty-second century London is by his own admission far from Bellamy's socialistic ideal: 'But here was no utopia, no socialistic state' (p. 59).

As rebels liberate Graham from his apartment, they fight against subjection through their own use of light:

> Then abruptly they were in darkness. The innumerable cornice lights had been extinguished. Graham saw the aperture of the ventilator with ghostly snow whirling above it and dark figures moving hastily. Three knelt on the van. Some dim thing – a ladder – was being lowered through the opening, and a hand appeared holding a fitful yellow light (p. 68).

By defeating the light, the rebels freeing Graham achieve the autonomy they do not possess in the face of the electric glare. They use a 'fitful yellow' light to rescue him, which we may presume is a flame-based light due to its colouring and behaviour. This reinforces the idea that the individual flame light encourages feelings of independence and agency. Electric light speaks for power in *The Sleeper Awakes*, as it did to Wells seven years later at Niagara Falls. The authoritarian government attempt to regain control over the disorder of the riotous city by causing the people to be 'thrown into confusion by the extinction of the lights' (p. 86). Light is power: the rebels extinguish it to rescue Graham, and later the 'Council' switch it off to confuse the rebels. Further adding to the flame's connotations as a light of freedom and autonomy, Wells describes how 'Here and there' in the government-enforced darkness, 'torches flared, creating brief hysterical shadows' (p. 107). The flame is a symbol of ultimate catalytic change; within its light there are connotations that cannot possibly be drawn from the static starkness of electric light. The shadows the flame casts are themselves fitful, brief and 'hysterical', thus further suggesting a sense of, admittedly limited,

[478] Edward Bellamy, *Looking Backward* (Boston: Dover Thrift Edition, 1996) p. 57.

movement and liminality that is impossible within the more powerful authoritarian gaze of electric light.

When the lights are turned off in an attempt to disorientate the people rising against the Council, it is possible to see how removing this framework for social behaviour fragments the people who are so integrated within the city's networks: Graham 'felt a curious sensation – throbbing – very fast! He stopped again. The guards before him marched on; those about him stopped as he did. He saw anxiety and fear in their faces. The throbbing had something to do with the lights' (p. 83). As the electric lights begin to throb into darkness, so Graham *feels* the pulse of the darkening lights. By awakening into a society that has been forced into interconnectedness, a totalitarian state symbolised by the electric light, Graham has himself become assimilated into the network. He throbs with the beat of the lights. Wells describes the globes of electric light in an organic way, making them the living heart of the city: 'Each huge globe of blinding whiteness was as it were clutched, compressed in a systole by a transitory diastole, and again a systole like a tightening grip, darkness, light, darkness, in rapid alternation' (p. 84). The terms 'systole' and 'diastole' link the organic function of the cardiac system to the illumination - reminiscent of McLuhan's suggestion of electric technology as an extension of the central nervous system, and the connection of science and technology with the individual in Foucault's modern episteme - which ensures a constant flow of work, productivity and subservience to a greater system, acting as both a symbol of the connection and as a literal aid to the systematic whole.

After the city is captured, the Council defeated and Graham installed as 'Master,' London is relit: 'The re-illumination of the city came with startling abruptness. Suddenly he stood blinking, all about him men halted dazzled, and the world was incandescent' (p. 107). The city re-emerges in a false dawn. The rise of light is not gradual but instant; this acts as a reminder that even though the malevolent Council has been ousted, their systems and structures are still in place, as later evidenced by Ostrog's attempt to take control of London and continue the legacy of the totalitarian dystopia. The systems, both social and technological, that have developed in this nineteenth-century vision of the future, are the true villains of the text. Technological connectivity and networks are seen as eradicators of what may be deemed natural, as well as any ideas of individuality. Wells makes this explicit, stating: 'After telephone, kinematograph and phonograph had replaced newspaper,

book, schoolmaster and letter, to live outside the range of the electric cables was to live an isolated savage' (p. 127). Electricity is presented as the technology of a modern utopia, but its connectivity encouraged society to grow into a faceless mass. To remain an isolated individual and shun the worth of electricity was to be a 'savage.' Furthermore, Graham considers the changes since his own Victorian era as inevitable:

> He perceived at once how necessarily the state of affairs had developed from the Victorian City. The fundamental reason for the modern city had ever been the economy of co-operation […] Those promises had by this time attained their complete fulfilment. The locked and barred household had passed away (p. 178).

Wells describes a system of living that had developed from the growing capitalist tendencies of the Victorian period into a society where an individual's only role in life was to contribute to this network of production and consumption. Privacy and individuality had been eroded due to the 'economy of co-operation'. In this future London, society has evolved into a more interconnected and social space, everything was shared, and individuality destroyed in an example of capitalist totalitarianism. Wells presents us with an extreme form of his contemporary reality, where the completely modern vision of electric lights illuminating cities was an indicator of the control of industry and capitalism over everyday life, and massively suggestive of an individual's need for inclusion within a network.

The absence of Electric Light in *The Time Machine*

The notion of extreme interconnected capitalism, a type that blinds through its unification, may also be seen in Wells's *The Time Machine*. The novel describes the remnants of an exploitative capitalist society, where industry has largely disappeared from the dominant social landscape yet the gulf between the elite and proletariat classes has increased. Tom Pemberton describes the novel as a 'bleak vision of a transhuman future', suggesting that 'the use and abuse of technology in this future has led to a trivialisation of human identity so extreme that neither the Eloi or the Morlocks can be described as human'.[479] Wells presents similar themes to *The*

[479] Tom Pemberton, 'H.G. Wells and Transhumanism' (June 4, 2015) from http://dh.canterbury.ac.nz/engl206/2015/06/04/h-g-wells-and-transhumanism/ [accessed on 14/10/2015]

Sleeper Awakes – future dystopia, an amplified sense of Victorian modernity, and ideas of class structure - yet electric light, and technology, is conspicuously absent for a novel set in the far future. However, there are several subtle acknowledgements of the technology which, when combined with the use of darkness in the text, further suggest an evolution in the literary nature of electric light.

The movement of *The Time Machine's* narrative may be charted through the presence of different types of artificial light, as well as the darkness that surrounds them. In the initial description of the Time Traveller's home, we are presented with an obvious lighting contrast, as the bright hearth that gathers the audience is held against the 'radiance' of the electric lights in their silver lilies. [480] Electric light is set in ornamental lilies of silver, intended more for display than function, and the most noteworthy effect of their light was how they 'caught the bubbles that flashed and passed' in the glasses of the gathered audience. Electric light suggests modernity and sophistication, whereas firelight is the primitive yet more natural force, something emphasised later in the novel by the Time Traveller's experiences in the darkness of the future, and with Weena and the match's dim flame.

After his journey into the far future, where from his Time Machine he witnesses the rapidity of day transitioning into night as it 'came like the turning out of a lamp' (pp. 18-19), The Time Traveller emerges into a society which has regressed to a pre-industrial relationship with light and dark. The fate of the Eloi, a future form of the human race who sleep together in large colonies and have created a society within which work is completely segregated to an under-species, may be seen as a continuation of both the rapidity of industrial evolution and Darwinian degeneration. Their relationship with light exemplifies this, as The Time Traveller describes how Weena:

> [D]readed the dark, dreaded shadows, dreaded black things. Darkness to her was the one thing dreadful. It was a singularly passionate motion, and it set me thinking and observing. I discovered then, among other things, that these little people gathered in great houses after dark, and slept in droves. To enter upon them without a light was to put them into a tumult of apprehension (p. 93).

Different to the incredibly illuminated future of *The Sleeper Awakes,* Wells presents us with a world where the dominant species has become terrified of darkness, and

[480] H.G. Wells, *The Time Machine* (London: Penguin, 2005), p. 3. All further references will be given in main body of text unless otherwise footnoted.

have no means of warding it off. Artificial light has completely disappeared due to the Eloi's incapability to attend to their practical needs. Conversely, the Morlocks have evolved to live in 'impenetrable darkness', thanks to eyes that are 'abnormally large and sensitive' that can see in the 'rayless obscurity' of their underground home (p. 53). Marina Warner suggests that the Eloi represent the lackadaisical nature of the Victorian elite, and the blind Morlocks 'vividly and repellently conjure the oppressed from a Victorian reformer's tract',[481] although both are united in their lack of artificial light. The roles of consumers and producers within a capitalist society have been split in *The Time Machine,* as the Eloi willingly sacrifice their manual skills, which include illuminating themselves, for a life of sun-lit luxury and night-time fear, whereas the Morlocks embody the repressed lower classes of a capitalist society.

We can see the fate of electric light as the Time Traveller explores the Museum district of old London, searching for a weapon to use against the Morlocks. Walking into one of the ruined South Kensington museums, he describes how:

> [W]e came to a gallery of simply colossal proportions, but singularly ill-lit, the floor of it running downward at a slight angle from the end at which I entered. At intervals white globes hung from the ceiling – many of them cracked and smashed – which suggested that originally the place had been artificially lit (p. 66).

Symbolically, the act of making a museum the only place in this dystopian future to contain evidence of electric light suggests the abandonment of artificial light at an indeterminate point in the future, and further embellishes the lights of Wells's 'transition age'. There is also a sense of reverie in the museum being the only place lit by artificial light; it is something to be marvelled at, and a source of inspiration and knowledge. There is a certain tragedy to the future's relationship with artificial light; the fact that society is split into producers and consumers encourages the disconnection between the individual and lighting autonomy. The elite, or Eloi, are incapable of lighting themselves after evolving in a world where production is out of their hands. This is what causes Weena's fascination with fire and the Time Traveller's match: in the flame she can perceive both product and consumption, origin and end: 'In this decadence too, the art of fire-making had been forgotten on the earth. The red things that went licking up my heap of wood were an altogether new and strange thing to Weena' (p. 72). Electric light created a further separation between

[481] Marina Warner, 'Introduction' in H.G. Wells, *The Time Machine* (London: Penguin, 2005), p. xxvi.

individual and light, and in Wells's future vision of a society literally split by capitalist processes, this division between artificial light and personal autonomy leaves the Eloi weak and vulnerable, and amazed and entranced by the agency of the flame.

At the root of the concerns addressed in Wells's representations of artificial light is the imperfect balance between the individual self and social collectivism. Individual autonomy and agency, associated with the very active nature of fire and candlelight, was slowly eroded in Wells's visions in favour of societies that eschewed the autonomy of the individual in favour of subservience to a networked mass, aided and reflected by the electric light that illuminated them. It is telling that in *The Time Machine,* the most celebrated technology in the distant future is the match. The Time Traveller entrances Weena with the flame of one of these nineteenth-century inventions, becoming a Promethean figure as he brings light to this technologically regressed future England. Soon after the escape from the Morlocks' tunnels, Wells describes how 'very soon [Weena was] smiling and clapping her hands while I solemnly burnt a match' (p. 50). The burning match, and fire in general in the story, acts as a reminder of the pessimism surrounding technology in Wells's writing. 'I don't know if you have ever thought what a rare thing flame must be in the absence of man' (p. 72) writes Wells, reminding us that it is man that makes fire, and that like any kind of technology, fire can also be misused, as it is at the end of the novel when the Time Traveller accidentally burns the forest and possibly kills Weena. The loss of technological networks of electric light suggests the threat of the growing reliance on such technology. Stephen Lilley highlights the reliance that has developed on networked electrical systems:

> When the electricity grid fails, those affected lose illumination, refrigeration, air conditioning (or heat), mass entertainment, communication mediums and computer access. Imagine if the grid stayed down for years. Wouldn't we lose modernity?[482]

Artificial light in Wells's work intimates a similar mistrust and reversion back to pre-modernity through its representations of the potential power and authority behind a networked, technological culture, and the socialising, yet anonymising, effect that it may have. In a transhumanist sense, it also serves to remind us that humanity is

[482] Stephen Lilley, *Transhumanism and Society: The Social Debate over Human Enhancement,* pp. 5-6.

ultimately in control of the technology, and acts as a warning not to allow networked technology, and ‘mass culture’ to dictate humanity’s existence and progress.

4.4 Electric Light 1900-1914: Realisation and Realism

In the early years of the twentieth century, perceptions of electric light transitioned from something authoritarian and faceless to a light of the inevitably modern. It shed its Science Fiction roots and solidified its role in society as a much more culturally accepted and practical technology. In industrialised countries, smaller electric networks of cities and towns became more interconnected after a long period of 'flimsy and impermanent'[483] infrastructures, and experiments with alternating current led to arguably the most valuable improvements in electric light's widespread use. However, it is important to remember that electricity was still limited to densely populated urban areas – it was only introduced in more rural places decades later. City dwellers had 'grown accustomed to electric light'[484] in public and, thanks to new innovations in different types of current, in their homes and interior public spaces too. According to Brox, in the cities with highly developed electric networks, 'any open flame, however bright, had become easy to disparage and at best carried a hint of nostalgia'.[485] Electric light was a beacon of the modern age the western world was emerging into at the start of the twentieth century, as direct contrasts between electric light and its predecessors tinged the flame-based lights with associations of the past.

Matthew Luckiesh suggests that the most radical improvement in electric lighting technology occurred in the early years of the twentieth century. In 1906, the filaments of electric light bulbs were first 'treated' in the heat of an atmosphere of hydrocarbons which made the filaments burn brighter and longer, as well as more reliably.[486] In 1907, electric incandescent light bulbs were illuminated at the average candle-power of 18.0, yet by 1914, this figure had more than doubled to 38.2 candle-power. Electric light was constantly improving and evolving during the years prior to World War I. Cities and homes were growing brighter all the time; it is hard to comprehend that less than 100 years prior to this growth of electric illumination, people were still allowing medieval apprehension towards an evening 'fraught with menace'[487] to dictate their lives. Perhaps most revolutionary was its instantaneousness; Chris Otter describes how electric light switches 'made

[483] Chris Otter, *The Victorian Eye,* p. 214.
[484] Jane Brox, *Brilliant* p. 155.
[485] Jane Brox, *Brilliant* p. 159.
[486] M. Luckiesh *Artificial Light: Its Influence on Civilisation*, p. 131.
[487] A. Roger Ekirch, *At Day's Close,* p. 6.

illumination tame and easy'.[488] Walter Benjamin described this transition in 1930 when remembering the lights of his childhood:

> Now the nineteenth century is empty. It lies there like a large, dead, cold seashell. I pick it up and hold it to my ear. What do I hear? […] the rattling noise of the anthracite that is emptied from the coal scuttle into the furnace; […] the clatter of the tube in its casing, the clink of the glass globe on its metal ring when the lamp is carried from one room to another.[489]

Benjamin hears the clatter of the lamp of his childhood in the dead husk of the nineteenth century. There is a determinedly sharp divide between the processes of kindling the lamp of his childhood, and of switching on the electric light of the early twentieth century. Electric light's nature had changed the *processes* involved in illuminating one's self or home; unlike candles or gas lamps, which required an individual to take an active role in the *production* of light, and required actual engagement with the light source, the care of electric light took place in activities that did not have the same intimate connection as its predecessors. While some attention was necessary in the maintenance of electric light – the necessary use of shades, the purchase and changing of bulbs for example – it was not the same as witnessing the light and fuel source in one object, and not at all the same connection one felt in the *activity* of lighting a lamp.

Electric light at the beginning of the twentieth century was still incredibly *new*, its ongoing evolution and perfection meant that it was inevitably seen as modern, often jarringly so when compared to the lingering flame lights of the previous century. It was also the first light source to benefit from corporate backing, turning illumination into a product more so than any previous form of lighting. Graeme Gooday points to the example of General Electric's promotion of their electric light at the Chicago Columbia Exhibition (also known as the World's Fair) in 1893. The company claimed that Edison's newly developed lightbulbs would allow for 'artistic luminous embellishment of interiors', further stating that 'luminous columns, garlands of brilliancy, festoons and cascades of prismatic light, glorious vistas of lucent beauty, all are now possible with the miniature electric lamp'.[490] It is important to consider the amount of corporate and consumer bluster that this depiction may contain. As

[488] Chris Otter, *The Victorian Eye,* p. 231.
[489] Walter Benjamin, 'The Lamp' in *Selected Writings: 1927-1934, vol. ii.* ed. Michael W. Jennings, Howard Eiland, Gary Smith, trans. Rodney Livingstone (Cambridge, MA: Belknap Press of Harvard University Press, 1999) p. 692
[490] General Electric Company, *Decorative Electric Lighting* (New York: Bartlett and Co., 1893) quoted in Graeme Gooday, *Domesticating Electricity* (London: Pickering and Chatto, 2008) p. 192.

Chris Otter points out, 'many were initially suspicious of such panegyric, not least because demonstrations of the incandescent light seldom matched the rhetoric'.[491] Despite electric lighting pioneers', and their companies', questionable claims, it is still important to consider how they outline perceptions of electric light at this stage, even if the effect was not as grand as they claimed. Electric light was still in a relatively early stage of its development, especially when considering that it would not become truly widespread in Britain until the installation of national electric services, such as the National Grid in 1926. *Electrician* magazine described it as an 'infant' that had 'fought its way onward, and soon arrived at lusty manhood'.[492] It was most obviously at this stage a symbol of the future and of the modern, an aesthetic ideal – as suggested by the General Electric rhetoric – and a technology that disconnected personal agency and light, especially in comparison to its flame based predecessors. George Ponderevo, in H. G. Wells's 1909 semi-autobiographical novel *Tono Bungay*, speaks of how thirty years previous, in school, he learned of 'the electric light as an expensive, impracticable toy, the telephone as a curiosity, electric traction as a practical absurdity'.[493] Wells's narrator is in disbelief at how quickly technology had improved by the early years of the twentieth century; the first example he notes is electric light, which had moved beyond being an expensive toy, and towards widespread public adoption in a very short space of time.

Schivelbusch remarks that 'between 1880 and 1920 electricity began to permeate modern, urban life',[494] further adding that the period of electrification also witnessed changes in the economic structure of capitalism: 'The transformation of free competition into corporate monopoly capitalism confirmed in economic terms what electrification had anticipated technically: the end of individual enterprise and an autonomous energy supply.'[495] The rapid electrification of light in the last few decades of the nineteenth century mirrored the growth of corporate capitalism; just as the individual agency involved in illuminating a space was taken out of a person's hands by gas and electric networks, so too was economic power concentrated into big banks and corporations. Wealth, power and light were now concentrated into larger corporate entities, rather than a myriad individuals. Light was now even more

[491] Chris Otter, *The Victorian Eye,* p. 182.
[492] 'Popularity of the Electric Light' in *Electrician,* 1899 (pp. 30-31).
[493] H.G. Wells, *Tono Bungay* (London: Penguin Books, 2005) p. 85.
[494] Wolfgang Schivelbusch, *Disenchanted Night,* p. 73.
[495] Wolfgang Schivelbusch, *Disenchanted Night,* p. 74.

obviously a commodity, especially when considering Karl Marx's definition of the term as something 'outside us, a thing that by its properties satisfies human wants of some sort or another'.[496] Electric light, unlike candle or firelight, and similarly to gaslight but in a much more focused manner, was a form of illumination that was 'outside us', a commodity that was beyond the control of an individual. Jane Brox states that in the later years of the nineteenth century, extending into the early twentieth, electric companies, still often called 'light companies' 'were private corporations, and since access to electricity was not yet considered the right of every citizen, they felt no obligation to deliver power to individual homes'.[497] Corporations had the capability to control the perceptions of the people, both in terms of the light that illuminated them, and how they understood those lights. They could light the streets, a social space where a large number of people could experience the illumination, yet there was still a distinct lack of homes that were lit by these companies – largely because the companies did not see this as being beneficial to their profit. This led to domestic electric light mainly being confined to wealthier homes and newer properties that were already attached to a network. It was only when electric companies began to notice the potential revenue in new electric appliances and advertise them, and following the introduction of a meter system where a household could pay for the electricity they used rather than be charged a flat rate, that it began to spread into more homes.[498]

Yet as Schivelbusch points out, attitudes towards this corporately driven society were generally more accepting. This was due to the networking of light, power and money being encouraged to be seen by the individual as providing a sense of inclusion within the 'collective'.[499] James Naremore and Patrick Brantlinger identify the confusion that surrounded the idea of the 'masses' in the late nineteenth century. Using the example of the German Social Democratic Party, they point to how the rise of Labour parties at the end of the period 'sharpened the Marxist identification of the masses with the industrial proletariat preparing to shake off its chains', yet this was disturbed by another definition that was growing, that of the masses as the anonymous, apparently classless '"crowd", the indiscriminate urban conglomeration'. However, they suggest that the factors that contributed to these

[496] Karl Marx, *Capital,* p. 41.
[497] Jane Brox, *Brilliant,* p. 163.
[498] Jane Brox, *Brilliant,* p. 165-166.
[499] Wolfgang Schivelbusch, *Disenchanted Night,* p. 76.

meanings are 'summed up in the phrase "consumer society", characterised by a sharpening separation between the spheres of production and consumption from about 1870 forward'.[500] The idea of the social 'mass' was something that gained more currency in the late nineteenth century and early twentieth than it ever had before; there was a reflection of the growth of consumer culture in both the evolving idea of the interconnected 'masses' of society and the networks of light and power that pervaded it. The de-individualisation of light, as lighting autonomy was taken from the hands of the individual and placed under the governance of gas and electric companies, mirrored the shift of economy from cottage-industry to much larger corporations. There was, as Schivelbusch documents 'a new faith in technical, scientific and politico-economic planning that emerged' around this time.[501] The lamp, a single source of light, was no longer understood to be complete; instead of the individual source, people began to psychologically recognise and appreciate, or at least accept, the value of being part of an interconnected network.

Lingering Images of Authoritarian Electric Light

At the beginning of the twentieth century, electric light still largely shared the responsibility of illumination with its forebears. This created an incredibly direct and obvious contrast in the symbolic juxtaposition of flame and filament-based lighting. Electric light was overwhelmingly modern, in its light, source and operation. It was not as fantastical to writers as it was to Verne or Wells, where the technology seemed to be detached from reality and personality; instead literature was beginning to reflect the realism and practicality of modern electric light. It became more enmeshed within character-based metaphor, rather than technological threats or authoritarian imagery. Yet there were still suggestions of the threat of interconnected authority that permeated fin-de-siécle portrayals of electric light.

In E.M. Forster's 'The Machine Stops' (1909) electric light illuminates a dystopian society in a similar, yet subtly different, way to Wells's *The Sleeper Awakes.* The light, confined to an interconnected underground network of individual dormitories, is different to the penetrative surveillance of Wells's novel. The

[500] James Naremore and Patrick Brantlinger, 'Introduction: Six Artistic Cultures' in *Modernity and Mass Culture,* ed. James Naremore and Patrick Brantlinger (Indiana: Indiana University Press, 1991) p. 5.
[501] Wolfgang Schivelbusch, *Disenchanted Night,* p. 75.

illumination is less aggressive in its control over its subjects, but still sinister in its spread and connectedness; the way Forster describes his characters' response to light suggests they are pacified by the illusion of choice and control that their electric lights provide them with. The governing body of Forster's 'Machine', The Committee, attempts to 'defeat the sun'.[502] This last effort at conquering the natural order of day and night meant that:

> [I]t was the last time that men were compacted by thinking of a power outside the world. The sun had conquered, yet it was the end of his spiritual dominion. Dawn, midday, twilight, the zodiacal path, touched neither men's lives, nor their hearts, and science retreated into the ground, to concentrate herself upon problems that she was certain of solving (p. 17).

The idea of defeating the sun is an inherently nineteenth-century one, bound together with the development of artificial light in the period. Luckiesh writes: 'without artificial light, mankind would be comparatively inactive about one half its lifetime […] The sun need not be considered when these operations are confined to interiors or localised outdoors'.[503] By defeating the sun, humanity extends waking and working hours, yet also loses the most natural rhythm of life. The Committee of Forster's story replace the balance of night and day with individuals' ability to control their own light within their personal living spaces, turning a natural order into something artificially manipulable – it reinvents the symbiotic gulf of light and dark as a synthetic copy, something that provides the illusion of choice to the inhabitants of the machine.

Forster describes the loneliness Vashti feels after her son Kuno abandons their video phone call, and how the instantaneousness of the light she generates, and the control she has over it, reinvigorates her: 'For a moment Vashti felt lonely. Then she generated light, and the sight of her room, flooded with radiance and studded with electric buttons, revived her' (p. 6). By having control over her own lights, Vashti is comforted by her ability to illuminate herself and her surroundings. Yet this is only an illusion of choice; she does not 'generate' the light, it is generated for her by the Machine itself and switched on by the electric buttons around her apartment. This illusion plays on the differing psychological processes of switching on an electric light. The instantaneous starkness of electric light suggests a rapid transition from one state to another, reinforcing Vashti's instant revival at the switch from dark to light. It

[502] E.M. Forster, *The Machine Stops* (London: Penguin Books Ltd., 2011) p. 17. All further references to this text will be given in the main body of work unless otherwise footnoted.
[503] M. Luckiesh, *Artificial Light: Its Influence on Civilisation*, p. 8.

sublimates the lack of natural order of the cycles of day and night into something designed to suggest control within a regulated network. The transhuman and posthuman blur in the relationship between light and individual within the Machine, which makes its occupants nothing more than 'blood corpuscles that course through its arteries' (p. 34). The human being becomes one with the technology, their choices dictated by the capabilities of the Machine. Alf Seegert suggests that in 'The Machine Stops', Forster treats technology and rationality as 'joint agents of dissociation, dual threats severing us from nature and from our embodied human integrity'.[504] In effect, the Machine has eradicated the whole notion of choice and free will, and created an artificially networked system that is driven by the desires of its occupants, who are merely cells in the circuitry of the Machine. Forster repeats the phrase 'she made the room dark and slept; she awoke and made the room light' (p. 9 & p. 44), suggesting the monotony and artificiality of the false sense of autonomy Vashti experiences. It is Bachelard's 'administered light'; Vashti is 'no more than the mechanical subject of a mechanical gesture'.[505] She is only permitted control to reproduce a distorted substitute for the natural cycle of night and day.

Kuno, her son, begins to see the Machine differently to his mother, as a controlling, authoritarian force. He asserts that 'Everything is light, artificial light; darkness is the exception' (p. 26). He sees darkness as liberating, something outside the authoritarian technocracy of the Machine. It is telling that in the story's final words, the two characters buried in the rubble of the collapsed Machine look up into an 'untainted sky' (p. 56). They find liberation in the natural order of day, yet they are still buried within the technology of their world; the two seem incompatible. Electric light in this instance creates subservience and passivity; it provides an illusion of control as it satisfies the Machine's population's desire for light, and a semblance of autonomy and agency, without relinquishing the reliance on the Machine. However, within Forster's more realist fiction, we can see a subtly different attitude towards electric light, and a growing acceptance of its illumination. Even in 'The Machine Stops', we can see a personal connection developing between individual and electric light, an entirely different association to the anonymising mass light presented in Wells's *The Sleeper Awakes.*

[504] Alf Seegert, 'Technology and the Fleshly Interface in Forster's 'The Machine Stops': An Ecocritical Appraisal of a One-Hundred Year Old Future' in *The Journal of Ecocriticism: A New Journal of Nature, Society and Literature 2* (University of British Colombia, January 2010) p. 34.
[505] Gaston Bachelard, *The Flame of a Candle,* p. 64.

A New Electric Literary Realism

While such ideas of a technologically deceptive network may quite naturally find a home in Forster's Science Fiction novella, there are similar signs of it in his more realist works, as well as those of his American contemporary Edith Wharton. Within their novels we can see portrayals of the growth of electric light in homes, towns and cities in the early years of the twentieth century, and the very personal reactions that accompanied it. Forster's 1907 bildungsroman *The Longest Journey* establishes electric light's role in constructing reality. In its first scene, Rickie Elliot and his Cambridge college friends discuss existential quantum mechanics by the light of a match and the fireplace. Their philosophical reverie is broken by the entrance of Agnes Pembroke, who later becomes Rickie's wife: 'She turned on the electric light. The philosophers were revealed with unpleasing suddenness.'[506] The instantaneousness of the electric light exposes the philosophers for what they are – dreaming college students - and breaks the philosophical reveries encouraged by the flames.

Agnes herself both embodies the qualities of electric light and is symbolised by it. During a conversation between Rickie's best friend Ansell and his friend Widdrington in the British Library, Widdrington remarks on Agnes: 'Well, I am inclined to compare her to an electric light. Click! She's on. Click! She's off. No waste. No flicker' (p. 179). Agnes's symbolic relationship with electric light affirms her dominance over Rickie, as she is metaphorically represented by the light that so often illuminates scenes of her relationship with Rickie with its solid gaze. Forster presents her as the charge that changes Rickie's life; Rob Doll suggests that 'Rickie's diseased imagination, which had invested Agnes with reality, has now led him to a false vision of love'.[507] Rickie's life is transformed by his feelings for Agnes. He abandons his writing career and begins teaching at Sawston School, an abrupt transition that is echoed in Agnes's electric instantaneousness, only for his relationship to eventually fall to 'emptiness and sterility'.[508] There is no sense of ambiguity as there is in the opening passages of the book where Rickie, Ansell, and

[506] E.M. Forster, *The Longest Journey* (London: Penguin Books, 2006) p. 6 *All further references to this text will be given in the main body of work unless otherwise footnoted*
[507] Rob Doll, 'E.M. Forster's the Longest Journey: An Interpretation' from http://www.emforster.info/pages/lj.html [accessed on 23/2/15]
[508] Rob Doll, 'E.M. Forster's the Longest Journey: An Interpretation'

the rest of the Cambridge boys, lit by the light of match and hearth, discuss the reality of a cow's existence. Agnes's own nature and reality is likened to the sharp duality of electric light, her stoniness of character insinuated through the inflexibility of the light source – always on or off, nothing in between the two states, and without any waste or imagination. Chris Otter writes that:

> Switches allowed one to control one's light: they also potentially enabled the control over the light of others or the formation of technologically mediated hierarchies of perceptual control. Illumination technology could, thus, reify social relations.[509]

Although Otter is discussing the reification of social order that takes place in institutes such as prisons, Agnes's first action of turning the electric light on and illuminating the philosophising scholars suggests her dominance over the realities and perceptions of Rickie. Electric light symbolises Agnes's influence through its absoluteness, as well as her role in limiting Rickie's imagination and creativity; it is either on or off, real or not. Upon the death of Gerald, Agnes's first husband, Rickie's transformation begins with almost electric suddenness. He muses 'Who wants visions in a world of Agnes and Gerald?' immediately after which Forster describes how 'he turned on the electric light and pulled open the table-drawer', taking out a short story that he now deems 'nonsense' (p. 60). Electric light acts as a symbol of the realities of life, and the absoluteness of Rickie's decisions. In a way that relates to McLuhan's image of electric light as a 'medium without a message', there is no need for 'visions' in the absoluteness of a world lit by electric light; within its glare everything is relentlessly real – creativity and imagination are shattered by its starkness.

A similar sense of the solid realities of electric light may also be read in Forster's *Howards End.* Electric light's glare in this story often highlights the reality of the characters' situations. For instance, the electric lights in various homes indicate the shallowness of middle to upper class desires to constantly move up the social ladder. The Schlegels gaze over at Wickham Mansion where the Wilcoxes live, and desire a similar place of their own, yet their Aunt Juley points out that when exposed by the glare of the light, the Schlegels' and the Wilcoxes' homes are indistinguishable: 'Turn the electric light on and it's almost the same room. One evening they may forget to draw their blinds down, and you'll see them; and the next,

[509] Chris Otter, *The Victorian Eye,* p. 232.

you yours, and they'll see you'.[510] Electric light exposes the fallacy behind the Schlegels' desire to establish themselves more firmly within society through their property, and draws a sharp contrast between their desires and Leonard Bast's reality. Bast's home, a place 'known to house-agents as a semi-basement, and to other men as a cellar' (p. 41) is also lit with electric light. It is described as

> [A]n amorous and not unpleasant little hole when the curtains were drawn and the lights turned on, and the gas stove unlit. But it struck that shallow makeshift note that is so often heard in the modern dwelling-place. It had been too easily gained, and could be relinquished too easily (p. 41).

At this stage in its history, electric light had started to become affordable and much more widespread domestically. Unlike the electric light that dominated everything in 'The Machine Stops', electric light in this realist story brings people together in a different way. Electricity creates uniformity and the illusion of comfort; Bast's home is still a 'not unpleasant little hole' when lit by electricity – it is not by any means *pleasant* but 'not unpleasant'. Through the representation of the 'makeshift note' of the modern dwelling place we are provided with an image of the ambiguously liminal nature of early twentieth-century society. Desire began to shape choice at this stage, largely due to the ongoing development of consumerism, and property ownership became a symbol of wealth. Bast's home, the Schlegels' apartment and the Wilcoxes' Wickham Mansion are all transitional, stepping stones to something else; there is no sense of home or permanency to them as there is, for example, in Howards End itself.

Forster views the rural home as 'England's hope' describing Hilton, where Howards End is situated, as being:

> [R]uled, not by a London office, but by the movements of the crops and the sun […] they kept to the life of daylight. They are England's hope. Clumsily they carry forward the torch of the sun, until such time as the nation sees fit to take it up (p. 276).

Electric light, as it does in 'The Machine Stops' and *The Longest Journey,* cultivates ideas of the modern realities of life; Forster sees a much more 'noble' and natural life in the understandable, yet old-fashioned, order of day and night. Everything is starkly obvious in electric light, whereas there is a sense of mysticism and romance, an attractive sense of the unknown, to other light sources. Consider, for example, the

[510] E.M. Forster, *Howards End* (London: Penguin Books, 2000) p. 51. All further references to this text will be given in the main body of work unless otherwise footnoted.

depiction of Mrs Wilcox: 'The light of the fire, the light from the window, and the light of a candle-lamp, which threw a quivering halo round her hands, combined to create a strange atmosphere of dissolution' (p. 58). Mrs Wilcox exists in a strange confluence of lights, a mystic figure who suggests the romance and mysticism of history - a sharp contrast to Agnes's electric harshness in *The Longest Journey.*

The ever-evolving London bears the brunt of Forster's criticism of the new England in *Howards End.* Margaret describes how she 'hates this continual flux of London. It is an epitome of us at our worst – eternal formlessness; all the qualities, good, bad and different, streaming away, streaming for ever' (p. 156). Furthermore, Forster depicts night-time in the city in a way that blurs the perceptual differences of the various artificial light sources:

> London was beginning to illuminate herself against the night. Electric lights sizzled and jagged in the main thoroughfares, gas lamps in the side streets glimmered a canary gold or green. The sky was a crimson battlefield of spring, but London was not afraid (p. 104).

London visualises the 'battlefield' of old and new in the form of its lights, which clash so clearly in the nighttime. It is Wells's 'transition age' amplified by rapid technological advance. The timelessness of London is emphasised through the confluence of lights that Forster describes: Old London, and old values, are nostalgically defined by the green and gold gaslights, and the new, modern city and its associations symbolised by the sharply sizzling and jagged electric lights. Yet there is an acceptance of this type of light now, a recognition that modernity is approaching - an overtly new, yet inevitable thing - as London uses electric light as a weapon to deter the darkness of night and admit the new century.

New York and Edith Wharton

New York was one of the first cities to have large-scale electric power stations and lighting networks implemented in 1882. However, New York's grid system of streets and avenues lent itself better to the power of electric lights than London's winding alleys and awkward confluence of old and new – 'The City of London's narrow, irregular nature produced a specific set of difficulties making it incomparable with the lighting of downtown Manhattan' states Otter.[511] Thomas Edison praised New York's

[511] Chris Otter, *The Victorian Eye,* p. 251.

lights on returning from a European trip in 1891: 'Paris impresses me favourably as the city of beautiful prospects, but not as a city of lights. New York is far more impressive at night'.[512] Electric light, due to the innovations of Nikola Tesla and George Westinghouse in adapting alternating current, penetrated both public and private spaces in New York in a way many other early twentieth-century cities were incapable of.

New York-born Edith Wharton's *The Decoration of Houses* describes a domestic electric light that is vulgar in its brightness:

> The proper light is that of wax candles. Nothing has done more to vulgarise interior decoration than the general use of gas and electricity in the living-rooms of modern houses. Electric light especially, with its harsh white glare, which no expedients have as yet overcome, has taken from our drawing-rooms all air of privacy and distinction.[513]

Wharton presents a very different image of the electric light than Edison does, who may of course be biased in favour of the technology he helped to create. It is vulgar and harsh, yet still irrefutably modern. In more enclosed domestic spaces, it is the softer light of the candles that Wharton deems preferable and more positive to interior design. She also highlights electric light's destruction of the privacy of domestic interiors, something important to acknowledge in the formulation of its associated symbolism.

The perceived crassness of electric light, particularly in comparison to other light sources, may also be seen in her fiction. Characters often occupy, reflect and embody electric lights as Wharton draws comparisons between light and the vulgarity of evolving social networks that her protagonists often yearn to be a part of. Although irrefutably garish in Wharton's eyes, electric light was becoming much more metaphorically intimate with literary characters at this stage, presumably due to its realisation in real life. It was growing more connected with individuals than previous images of a detached, totalitarian system of light. Lily Bart, protagonist of *The House of Mirth,* is presented as being both aware of electric light's vulgar gaze, yet also attracted to its illumination:

> As she sat before the mirror brushing her hair, her face looked hollow and pale, and she was frightened by two little lines near her mouth, faint flaws in

[512] Edison quoted in Paul Bogard, *The End of Night,* pp. 23-24.
[513] Edith Wharton and Ogden Codman Jr., *The Decoration of Houses* (New York: Charles Scribner & sons, 1914) p. 127.

> the smooth curve of the cheek. "Oh, I must stop worrying!" she exclaimed. "Unless it's the electric light –" she reflected, springing up from her seat and lighting the candles on the dressing-table.[514]

This early depiction of Lily Bart's relationship with electric light shows that she acknowledges its capacity to expose reality, as well indicating awareness of the aesthetic culture she ascribes herself to. It shows her beauty and radiance, yet there is an undercurrent of crudity that undermines this idea. Even in candlelight the stress marks on her face still show, yet they are slightly blurred by the yellow aura of the candle. It is a similar reaction to Undine Spragg's experiences with electric light as she gazes into the mirror in *The Custom of the Country:*

> The blazing wall-brackets formed a sufficiently brilliant background to carry out the illusion. So untempered a glare would have been destructive to all half-tones and subtleties of modelling; but Undine's beauty was as vivid, and almost as crude, as the brightness suffusing it. Her black brows, her reddish-tawny hair and the pure red and white of her complexion defied the searching decomposing radiance: she might have been some fabled creature whose home was in a beam of light.[515]

The electric light is not only untempered, but holds a 'searching decomposing radiance', the language suggesting the invasiveness and contamination of the illumination. Wharton's description of Undine as being at home in a beam of light indicates her protagonist's ability to embody qualities of electric light. It is something that Undine knows from the start of *The Custom of the Country,* but something that Lily must learn. Lily sees herself for what she is under the real glare of electric light, whereas Undine sees beauty in the vivid, crude light that diffuses her image. Instead of alienating an individual at a metaphoric level, electric light is now bound to them.

The women's relationship with the electric light is reminiscent of a satirical poem from *Punch* called 'A Lady on Electric Lamps':

> This lamp malign of Edison's is worse than brightest day;
> A veil may serve to screen from sun, but when in evening dress
> There's nothing twixt these awful lamps and female loveliness.
> Then, men of Science, you must aid and tell us if you please,
> How we shall make our charms withstand such glaring lights as these
> For if the Ladies find these lamps still turn them pale and wan,
> They'll lead a feminine crusade 'gainst Edison and Swan!'[516]

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[514] Edith Wharton, *The House of Mirth* (Oxford: Oxford University Press, 2008) p. 29. All further references to this text will be given in the main body of work unless otherwise footnoted.
[515] Edith Wharton, *The Custom of the Country* (Oxford: Oxford University Press, 2008) pp. 14-15.
[516] 'A Lady on Electric Lamps' *Punch,* July 29, 1882, p. 37

Women of high society, or those who yearned to be part of it, were struck with a lighting paradox: the new electric lights ensured that evenings were brilliantly lit, and encouraged the leisure class to populate artificially-lit areas, yet the light also exposed and vulgarised appearances. They needed to 'make [their] charms withstand such glaring lights as these'. Electric light meant that one could be seen, but also ensured that any frailties or cracks in an outer appearance were exposed – there was nothing to screen the exposure the 'awful lamps' subjected 'female loveliness' to. C. Willett Cunnington highlights how in England prior to 1900, colours of dresses 'were violently discordant', until yellow became the dominant colour in fashion as 'its use, in the brilliance of the new electric light, seemed to turn those tall smooth satin figures into pillars of gold'.[517]

Both Undine and Lily desire the electric spotlight, and are shown to hold an intimate relationship with the light, yet both are eventually snared and exposed within the electric glare. From the following depiction in *The House of Mirth*, we can see the constrictive paradox of the young women both wanting to be within the light, yet also produce it:

> All means seemed justifiable to attain such an end, or rather, by a happy shifting of lights with which practice had familiarised Miss Bart, the cause shrank to a pinpoint in the general brightness of the effect. But brilliant young ladies, a little blinded by their own effulgence, are apt to forget that the modest satellite drowned in their light is still performing its own revolutions and generating heat at its own rate (p. 115).

Lily's light is artificial; she has attempted to construct her appearance to be resplendent in the harsh glare of electric light, and to produce a similarly blinding effect. There is a comparable idea at work in *The Custom of the Country,* as Undine Spragg's vision sweeps the theatre auditorium: 'from the broken lines of spectators below her to the culminating blaze of the central chandelier; and she herself was at the core of that vast illumination, the sentient throbbing surface which gathered all shafts of light into a centre.'[518] Undine yearns to be at the centre of everything, casting light out from the 'core', illumination made 'sentient'. This metaphor is double-edged, as what Undine desires is attention and popularity, which being a light would ensure, yet it also means that anyone who looks at her would be blinded – a possible critique of the aesthetic culture that Undine is entering. Undine and Lily's depictions suggest a

[517] C. Willett Cunnington, *English Women's Clothing in the Nineteenth Century* (New York: Dover Publications, 1990) p. 396.
[518] Edith Wharton, *The Custom of the Country*, p. 39.

desire from the women to be considered to be both visible within the new illumination, but also a source of light and activity themselves. They want to conduct light, yet also reflect it.

As Lily descends the social strata, her relationship with light changes, and she finds herself no longer producing light, or being accommodated within electric light, and is instead caught by it. As she is introduced to Mrs Hatch she describes herself as 'conscious of entering a new world', further adding that this was a 'more dimly-lit region' (p. 266) than she had been used to. Wharton points out however, that it was only figuratively that Lily perceived the illumination of Mrs Hatch's world as more dimly lit, stating that 'in actual fact, Lily found her seated in a blaze of electric light' (p. 266). This both acknowledges the ongoing metaphor of shifting artificial lights that occurs in *The House of Mirth,* as well as showing how Lily is constrained by the electric light that she yearned to occupy for so long. Rather than being a power of attraction, it now restricts her in its powerful glare; an idea heightened by the depiction of Mrs Hatch as 'having the fixity of something impaled and shown under glass' (p. 266) – electric light shifts to suggest something clinical and scientific, while still retaining intimate links with the individual *within* the network of display and vision.

After Lawrence Selden seemingly rescues Lily from a potential life of poverty – even though she still ends up debt-ridden and addicted to a sleeping draught – her attitude towards artificial light changes. She prefers the 'friendly proximity of the kitchen fire' to the electric street lamps (p. 305). The hearth, especially when contrasted to the cold glare of the electric lamps, is yet again presented as the light of warmth and intimacy. On her last meeting with Selden, she describes their love as leaping up between them 'like an imperishable flame' – there is a passion to fire and flames that cannot be understood in the cold whiteness of the electric lights. Indeed, the last time we see Lily walking the New York streets, she enters Bryant Park, where Wharton conjures images of her sadness through her disaffection with electric light: 'The melancholy pleasure ground was almost deserted when she entered it, and she sank down on an empty bench in the glare of an electric street-lamp. The warmth of the fire had passed out of her veins' (p. 302). There is a direct contrast of lights here, as the warmth and safety of the fire, which seeps into Lily's veins, is juxtaposed with the cold glare of electric light which can only remain on the surface. When she returns

home, and falls asleep for the final time after taking a deadly dose of sleeping draught:

> [H]er mind shrank back from the glare of thoughts as instinctively as eyes contract in a blaze of light – darkness, darkness was what she must have at any cost. She raised herself in bed and swallowed the contents of the glass; then she blew out the candle and lay down (p. 313).

Lily, unlike the young woman we met at the start of the story, who desired to be both conductor and centre of radiance, now wants to fade away, and desires nothing but darkness. She is blinded by her thoughts as much as 'eyes contract in a blaze of light.' Her final act of extinguishing the candle is highly symbolic, in a similar manner to Nana's deathly image in candlelight, as well as Gervaise's desperation in *L'Assomoir*, as it intimates a much more personal choice than the switching off of an electric light. The blowing out of the candle suggests a sense of control that she has never had while entrenched within the very interconnected aesthetic modern society. To her, darkness is now more preferable than the intense reality of electric light that has left her ultimately discarded and disaffected.

In these early years of the twentieth century, as electric lighting grew more prominent, its literary use developed to be more engrained within the language and poetics of the text. Progressing from the personally detached images of Verne and Wells's monolithic electric lights, more at home within Science Fiction than reality, electric illumination became something within which elements of humanity could be found in early twentieth-century literature. Agnes Pembroke's electric stoniness, the binding nature of electric light in the homes of *The Longest Journey*, Undine Spragg's desire to be luminous, and Lily Bart's changing relationship with her own illumination suggest how electric light had become more personally involved, and how its metaphoric use reflected its realisation in society and culture. Early twentieth-century uses of electric light in literature emphasise how people are individuals within a collective, as opposed to anonymised characters within a network – a subtly different notion to the networked authoritarianism of Verne and Wells's early depictions of electric light, and one that reflected the growing acceptance of the artificial light. As was the case with the changing attitudes towards corporate capitalism and connected cultures, people began to understand electric light for its value within a network; knocking out one lamp would not trip them all. Electric light's acceptance, and subsequent realisation in literary fiction, was due to a

combination of a gradual perceptual acceptance of the new type of white light and an improvement in the delivery and accessibility of technology. However, the growing acceptance of electric light did not necessarily mean that it was universally appreciated; the acceptance of it in Forster and Wharton's texts is tinged with discomfort, and a yearning nostalgia for older forms of light. Even though there was still some negativity surrounding electric light, it is easy to see how it developed from something that lit early scientific romances in a positive, exploratory way, to a technology that defined an emerging technological claustrophobia around the turn of the century, before gradually being accepted as a light of the modern, and something that did not simply act as a symbol of the 'other', but as a symbol of humanity too.

Summary and Conclusions

Satellite Image of Europe at Night from Space, 2014.

The Lightscape of the Early Twentieth Century: Why Stop Here?

Over the course of the nineteenth century, humanity's relationship with light and darkness changed enormously. Technological innovations of the period allowed nighttime to be colonised, as culture and society pushed through the bounds of evening to establish tenets of social interaction that came to define a truly modern world. The Preface to *Cities of Light: Two Centuries of Urban Illumination* summarises this idea well:

> If modernity may be characterised by rapid, incessant change, then artificial light – instantaneous, ubiquitous, evanescent – is modernity's medium. The alternation of day and night, a celestial paradigm and transcendent mold for life on earth, had become provisional, variously summoned into being with the flip of a switch to serve production, convenience and amusement.[519]

Artificial light revolutionised life during the period. It helped society and culture develop from something utterly dependent on the cycle of day and night to something that held power over the natural rhythm of life. It linked people together in a way that had not been truly envisioned prior to the nineteenth century, and it transformed relationships between people and others, and their surroundings, through the altered definitions of night and day.

The many forms of artificial light introduced in the nineteenth century were not successive in their use, they were complementary; by the end of the period, all of the light sources discussed in this study were still being used, often sharing lighting responsibility and coexisting within the same space. As Chris Otter argues: 'The Nineteenth Century is the history, not of the rise of electricity or even of gaslight, but of the proliferation, concatenation, and spatial juxtaposition of multiple light forms.'[520] The different light sources, and their associated symbolism, became superimposed over one another, and formed a wide spectrum of available light in the later years of the century. This notion is integral to my study, as the comparisons and contrasts of light were often some of the most analytically dense examinations in literature of the period. The lightscape of reality and literature by the end of the nineteenth century was completely shared – different lights interacted with each other, casting their symbolism on other forms of illumination and affecting the way people

[519] 'Preface' in *Cities of Light: Two Centuries of Urban Illumination,* ed. Sandy Isenstadt, Margaret Petty, Dietrich Neumann (New York: Routledge, 2015) p. xvii.
[520] Chris Otter, *The Victorian Eye,* p. 261.

perceived them, as well as how they perceived *by* them. It is this phenomenon that aids much of the metaphorical use of artificial light in the literature of the period, as these parallels and contrasts between different sources afforded authors ways to critique the schisms and similarities in their own societies and cultures.

But why stop this study here, if the entrance to the twentieth century provided such a deep and saturated picture of the role of artificial light in society and literature? The history of artificial light continued to evolve and many major developments in electrical lighting occurred decades after the close of the nineteenth century. The National Grid was not established until 1926, and America's Rural Electrification Act was not passed until 1934. However, the nineteenth-century chapter of artificial light's story essentially closed in 1914, with the onset of the First World War. The War disrupted many of the changes artificial light wrought in the years preceding it, and in many ways brought about a reversal of modernity. Wartime's effect on light was not felt as much as in the shift in Standard Time Zones. Daylight Saving Time was introduced during World War One in an effort to minimize the use of artificial light in order to save money and fuel for the war effort.[521] Artificial lighting was also much more subdued in cities, as Jane Brox describes how 'Across Europe during World War I, it was by their lights that people were betrayed, as airmen carried out strategic bombing of towns and cities at night'.[522] Meanwhile, on the battlefields, the intimate human relationship with the candle emerged yet again through soldiers cooking meals by the heat of a candle flame, and using the wax to rid themselves of lice.[523] In letters sent from the trenches of World War I, we can gain an idea of how important candlelight was to the lives of the soldiers, as well as how much relationships with artificial light regressed. An account of trench life details the confusion and harsh realities of war and the daily struggle to keep up morale. An anonymous soldier signs off his letter with: 'I am trying to keep cheerful through it all and hope to come through all right. Now I shall have to close as my candle is nearly finished.'[524] The candle, and its available light, dictates the activities and behaviour of

[521] 'History of Daylight Saving Time' from http://www.timeanddate.com/time/dst/history.html [accessed on 15/7/15]
[522] Jane Brox, *Brilliant,* p. 215.
[523] Adrian Lee, 'The Battle to Feed Tommy: New Exhibition looks at the Diet of a World War One Soldier' (August 23, 2014) from http://www.express.co.uk/news/world-war-1/502452/The-Battle-to-feed-Tommy-The-diet-of-a-WW1-soldier [accessed on 24/7/15]
[524] 'A Turn in the Trenches' in *Letters from the Trenches: The First World War by Those Who Were There* ed. Jacqueline Wadsworth (Barnsley: Pen and Sword Books, 2014) p. 39.

the unnamed soldier. It is a far cry from the garishly illuminated city streets, and the advent of electric lighting that dominated images of modernity less than ten years before. It stands out as a symbol of hope, yet also of the threat of extinguishment. Indeed, the candle in this instance may not have even been a typical candle, instead it is more than likely that it was what became known as a 'trench candle.' These were easily produced makeshift candles made from strips of rolled up newspaper that were then boiled in paraffin.[525] Not only had light itself regressed, the human connection to the light had increased due to the need for constant care and attention, and the return of individuality and uniqueness to the materiality of light sources. These 'trench candles' burnt for longer than their domestic counterparts, yet with a much dimmer light.

In World War I, the showing of light after sunset was an offence by law.[526] The image below is a notice that was put up in a Norfolk hotel in 1915; it indicates how crucial the Blackout rules and regulations were, and shows how much light and darkness had returned to an oppositional relationship with little liminality in between.

Blackout Instructions for Hotel Guests, 1915.

[525] *Popular Science Monthly, Vol. 92, No. 2* (New York City: February 1918) p. 214.
[526] Maurice Rickards, *The Encyclopaedia of Ephemera* (New York: Routledge, 2000) p. 12.

The symbolism of World War I literature similarly reflects the halting of light's progression. Wilfred Owen's 'Anthem for Doomed Youth' depicts a relationship between individuals and light that was reminiscent of earlier uses of the candle in literature – very distinct from the mass electric light that was seen in literature in the few years prior to the war:

> What candles may be held to speed them all?
> Not in the hands of boys, but in their eyes
> Shall shine the holy glimmers of goodbyes.
> The pallor of girls' brows shall be their pall;
> Their flowers the tenderness of silent minds,
> And each slow dusk a drawing-down of blinds.[527]

The night that Owen depicts is strikingly different to the night that was portrayed in late nineteenth century literature; it is distinctly more natural. The dusk is 'slow', rather than being changed by artificial light, the fluid progression between day and night emphasising the sad inevitability of death in wartime. Furthering this idea, we may understand the reliance on the artificial light of the candle both in terms of the actual item and literary symbol. In this instance it is associated with the 'holy glimmers of goodbyes', as Owen creates an image of the ceremonial use of candles in funerary aspects which links to the transition from light to dark, and from life to death. There is a renewed finality to the symbolism of light and dark; the concepts, which were made increasingly liminal in the nineteenth century, reverted to a binary metaphor in the wake of the First World War.

Similarly, Siegfried Sassoon's 'Repression of War Experience' reiterates the value of the candle at this point in history, with another reference to how distinct the concepts of light and dark were in wartime:

> Now light the candles; one; two; there's a moth;
> What silly beggars they are to blunder in
> And scorch their wings with glory, liquid flame –
> No, no, not that, - it's bad to think of war,
> When thoughts you've gagged all day come back to scare you;[528]

Sassoon uses the figure of the candle, prominent in both the trenches and in funerals of soldiers and remembrance services, to draw parallels between the lighting of its flame and the sparking of mental ratiocination that reminds soldiers of their wartime

[527] Wilfred Owen, 'Anthem for Doomed Youth' in *The Poems of Wilfred Owen* (Hertfordshire: Wordsworth Editions Limited, 2002) p. 56, ll. 9-14.
[528] Siegfried Sassoon, 'Repression of War Experience' in *War Poems of Siegfried Sassoon* (New York: Dover Publications, 2004) p. 80, ll. 1-5.

experiences. His poem's rhythm is charged by the 'one; two' of the first line, as the speaker develops a flow of thought that links the moths who are attracted to the candle's flame with those 'who scorch their wings with glory' in battle. The 'one; two' also suggests clear, dichotomous progression, emphasising the duality of archetypes that re-emerged at wartime; light and dark, good and bad, life and death. Initial research into the effect of war on artificial light suggests that, while a few major examples have been detailed here, it is far too large to be covered in detail in a conclusion. This, combined with its disruption of the role and representation of artificial light, makes it a clear end point for this study, as it rounds off the development of light symbolism and associations during the nineteenth century with a very definitive blackout, while still paving the way for future research.

There is still much to be uncovered in the history of artificial light's influence on literature in the nineteenth century. Gaslight's impact, for instance, is limited by being contained to a single chapter, and while it was essential to limit the coverage of gas within this study for the sake of brevity and comparison, there are still many areas ripe for exploration – its multinational development created a mass of different perceptions across western cities that could expand upon the depth of this study, which due to limitations of space is confined to Paris and London. Also, there is no reason why such a study could not examine the role of artificial light in eastern literature; it was only to limit the focus again that Europe and America were chosen to discuss in detail. There are also countless literary texts that, while proving useful to the research, and reinforcing the ideas covered in this thesis, simply could not be included for the sake of brevity.

The Key Ideas: Blurring of Archetypes, Modernity, and The Individual

This thesis identifies the evolving psychology of light's relationships with people and literature during the nineteenth century. It documents the slow acceptance of *modernity*, and the growing divide between individuality and mass society. Artificial light at the start of the nineteenth century held an incredibly intimate relationship with the individual. As artificial light developed, it was mirrored in the fluidity of public opinion concerning consumerism, capitalism and collectivism. Gradual acceptance of electric light developed alongside the growing understanding of capitalist culture as something *collective,* rather than a faceless corporately-driven network. This

characterised artificial light's growth and the changing perceptions of it during the early years of the twentieth century. It progressed from the intimate agency of a personal connection to flame lights, what Bachelard terms an 'image of solitude',[529] to the contrasting, and much more public, image of 'administered light'.

This movement, from an autonomous position to a shared social experience, helped to shape the concept of modernity that emerged at the end of the nineteenth century. Artificial Light bloomed from being isolated in its intimacy with the individual and domesticity to something that governed the way people behaved in public. Marshall Berman describes modernity as something that combines an awareness of the old, with the possibility of the new, suggesting a 'unity of disunity',[530] something that was reflected in the coexisting infrastructure of artificial light. Berman discusses the Nevsky Prospekt of Petersburg, and the Boulevards of Haussmann's Paris, highlighting how they served as a 'focus for newly accumulated material and human forces; macadam and asphalt, gaslight and electric light, the railroad, electric trolleys and automobiles, movies and mass demonstrations'.[531] Modernity is defined by the enmeshing of human and material, by the power of the product, and the interdependence of civilisation's networks. Artificial light's evolution aided this idea, as it enabled humanity to be better connected, and increased the time and space available to interact in. Light developed into a technology of connection.

For a true representation of the transition to a world of modernity, consider the absolute contrast between the role of artificial light in the early nineteenth century, and its role in the early years of the twentieth. Night-time progressed from 'man's first necessary evil',[532] as candles and fires poked holes in the darkness, and required people to be contained within the aura of protection light provided, to something that could be mapped, explored and dominated under the powerful glare of networked illumination. Artificial light exposed the darkness of the past, making life out of nighttime obscurity, and promised an illuminated and connected society. It upset the balance of day and night that had dictated the pattern of life for centuries past. This was particularly significant to the presence and value of artificial light in the literature

[529] Gaston Bachelard, *The Flame of the Candle,* p. 9.
[530] Marshall Berman, *All That is Solid Melts Into Air: The Experience of Modernity* (New York: Simon And Schuster, 1983) p. 15.
[531] Marshall Berman, *All That is Solid Melts Into Air,* p. 194.
[532] A. Roger Ekirch, *At Day's Close,* p. 3.

of the nineteenth century. As may be observed from this thesis, Light's presence and influence increased in literature. Not only in the density of references to artificial illumination, but more importantly the use of the technology in literary techniques such as metonymy, metaphor and symbolism.

Artificial Light *changed* literature during the nineteenth century. It provided the authors discussed in this study new temporal spaces to recreate, while also providing them with ready-made metaphors with which to judge emerging societies and cultures. Similarly, it also had a definitive influence on the tone of their novels, and the morality of their characters. Genres were influenced by light, both directly and indirectly – the candle's contrast to gas helped Collins to create his Gothic urban mysteries; Zola's Naturalism was influenced by the leisure-class gaslighting aided, Science Fiction blossomed in the nineteenth-century's melting pot of technological progress. This type of effect has rarely been considered in criticism or histories of light prior to this study, and is useful not only in judging light's affect on literature, but in corroborating some of the more historical accounts of artificial light. Through an application of literary, psychoanalytic, and social theories, the thesis identifies light's role in the transition of personal, independent agency towards mass, social identity; the intimacy of flame-lights replaced by the isolation through anonymity of networked light in a reflection of the society that evolved in the post-industrial landscape. From this, we may also see the creation of modernity in the fluid treatment of such lights, as the acceptance of network-based illumination coincided with the growth of a very modern, connected society. Artificial illumination, and responses to it, also encouraged the development of economy through its links with capitalism, production, and consumerism. The thesis exposes how networks of gas and electric created a new *reality;* they created light out of nothingness, which, combined with the increase in the affluence of the middle-classes, led to a new age of leisure and entertainment in a temporal space that had not been charted in the same way before.

By its very definition, artificial light is of course, not natural - it is manufactured, created out of absence. The concept of artificiality blurs the boundaries between existence and non-existence, just as artificial light blurs the lines between light and dark, and night and day. This resulted in one of the most fundamental literary metaphorical dichotomies becoming fractured: Michael Osborn describes the

light/dark dualism as one of the 'archetypal metaphors of rhetoric'.[533] He argues that the dualism's 'motivational basis is shared in varying degrees by […] other archetypes'.[534] Artificial light infiltrated this basic structure of metaphor, and influenced writers to reproduce the blurred nature of light and dark and night in day within their work, resulting in an opening up of the spaces inbetween oppositional archetypes, suggesting more variable states of representation that still adhere to the light/dark archetype yet are much less binary in their ideas. Fire's mutability as a symbol, the versatility of the candle in representing states of known/unknown, gas's ability to blur established orders and electric light's overwhelming disruption of concepts of light and dark all exemplify this idea. Through its situation between the most basic dichotomy of life, that of light and dark, or day and night, artificial light created a markedly liminal area of discourse. Within this area of symbolism and metaphor, vaguer ideas could be discussed, as ideas became less binary and more fluid. The diminishing space between the two symbols created a metaphoric ideal of much more versatility and variability than before; states of matter, emotion, and progress were no longer portrayed through light and dark in a manner so black and white. Light metaphor and symbolism was longer as simple as good or bad, day or night, and light and dark.

[533] Michael Osborn, 'Archetypal Metaphor in Rhetoric: The Light-Dark Family' in *Quarterly Journal of Speech* 53 (1967)
[534] Michael Osborn, 'Archetypal Metaphor in Rhetoric: The Light-Dark Family' in *Quarterly Journal of Speech* 53 (1967)

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